

PSE

ARCHERY

2023

PSE DRIVE NXT MANUAL

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WARNING

SAFETY

- **Only operate a bow with proper instruction.** Improper operation of archery equipment can cause injury to self and others.
- **Always wear safety equipment when operating a bow.** Wear safety glasses and an arm guard.
- **Before each use, check your bow for proper working components.** If any part of the bow is damaged or broken have the bow inspected by an authorized bowyer before use.
- **Do not physically modify any part of your bow or components.** Modifications will void a manufacture warranty and increase the risk of malfunction and/or injury.
- **Check that all arrows are in good working condition before use.** Only use arrows suitable for your bow. Consult with an authorized bowyer to find the correct arrow specifications for your bow.
- **Never dry-fire a bow.** Risk of damage to the bow or personal injury increases if the string is released at full draw without a nocked arrow. If you must let-down a drawn bow string, do so slowly and carefully.
- **When operating a bow be sure of the target and what lies beyond.** Only release an arrow when there is a safe and reliable backstop beyond the target.

DESCRIPTION

The 2023 PSE Drive NXT is the next step in modern archery equipment. This bow is the ultimate combination of performance and affordability. State-of-the-art materials make this bow lightweight without sacrificing accuracy. The PSE Drive NXT is formidable archery technology at competitions or in the field.

SPECIFICATIONS

- BRACE HEIGHT: 7"
- WEIGHT: 4.4 LBS.
- DRAW LENGTH: 24"-31"
- DRAW WEIGHTS: 60, 70
- LET OFF: 80%
- LIMB BOLT TURNS: 10
- BOW SPEED: 330-322 FPS

GLOSSARY OF ARCHERY TERMS

Aperture: A circular-shaped sight.

Anchor Point: A personalized location on any archer's face that is consistently touched by the draw hand or bow string when the bow is held at full draw.

Arm Guard: Safety equipment worn on the wrist of the arm that holds the bow to protect against bow string impact during release.

Arrow: The long, cylindrical projectile shot by the bow.

Arrow Nock: The clip at the back of an arrow that attaches to the bow string by pressure fit.

Arrow Rest: The component on the riser that supports the arrow until the moment of release.

Back Stop: A backstop is an artificial or naturally occurring object situated behind an archery target that is capable of catching or stopping arrows.

Bow Sight: A bow component that attaches to the riser and used to increase accuracy.

Bow Sling: A loosely fitted strap around the shooter's bow-hand and riser that prevents the bow from falling during the release of an arrow.

Bow Speed: The measurement, in feet per second (FPS), of how fast a bow shoots an arrow.

Bow String: A cord made of multiple strands which are held under tension between the upper and lower limbs of a bow.

Bowyer: A tradesperson with a specialization in bow construction and maintenance.

Brace Height: The distance between a bow's grip and the un-drawn bow string.

Cam: A pulley wheel with an elliptical shape that is used in a compound bow.

Cam System: A set of 2 pulleys, each on the upper or lower limbs of a compound bow, which have the dual effect of mechanically increasing the maximum draw weight while simultaneously making it easier to pull and hold the bow string.

Compound Bow: A compound bow uses a system of pulleys and cords to leverage power from the limbs.

D Loop: A small piece of cordage in the shape of a “D” that is attached to the bow string. The purpose of the D Loop is to offer a location for a release aid to mechanically connect to the bow string without risking wear or damage.

Draw: To hold the bow in one hand of the forward extended bow arm while simultaneously holding the bow string at the nock point and activating the back muscles to pull the string horizontally away from the riser.

Draw Length: The distance between the riser and an archer’s anchor point.

Draw Weight: The force (in LBS.) required to pull a bow string to full draw.

Dry Fire: To release the bow string without an arrow attached.

Form: The stance and posture required to safely operate a bow.

Full Draw: When a bow has been drawn by an archer to the maximum distance between the riser and anchor point.

Grains: The unit of measurement for the weight of an arrow.

Grip: The handle on the riser, located below the arrow rest.

Kiss Button: An attachment on the bow string that makes contact with the archers face when at full draw.

Let Off: On a compound bow, the percentage of the total draw weight, at full draw, that is held with the mechanical assistance of the cam system.

Leveler: A bow sight component that assists the archer to determine straightness of the bow on the horizontal axis.

Limbs: The parts of the bow that are bent when drawn to generate the force that propels the arrow. The limbs are attached to the top and bottom of the riser and hold the string under tension between them.

Limb Bolt: A limb bolt is the fastener that connects the limbs of a bow to the riser. Some limb bolts can be adjusted to increase or decrease the bows draw weight.

Nock Point: The place on the bow string where the arrow is attached consistently.

Peep Sight: A small hollow ring, inserted into the bowstring, which aligns with the sight and archer’s eye when the bow is held at full draw.

Range: The distance between the shooter and the target.

Release: To let go of the bowstring while held at full draw.

Release Aid: An accessory held by or attached to the draw hand that is connected to the bow string which is used to facilitate a consistent release.

Riser: The rigid central component of the bow that includes the grip, arrow rest and receivers for other accessories such as the limbs and sight.

Spine: In archery, the measurement of flex or bend in an arrow shaft. A higher spine measurement indicates a more flexible shaft. Bows with a high draw weight require stiff (low spine) arrows to withstand the force generated.

Stabilizer: An accessory that attaches to the riser to provide balance and stability to the bow.

Target: A stationary object intended to be struck by arrows. Targets are usually colored brightly to be seen at long distances.

PSE DRIVE NXT COMPONENTS

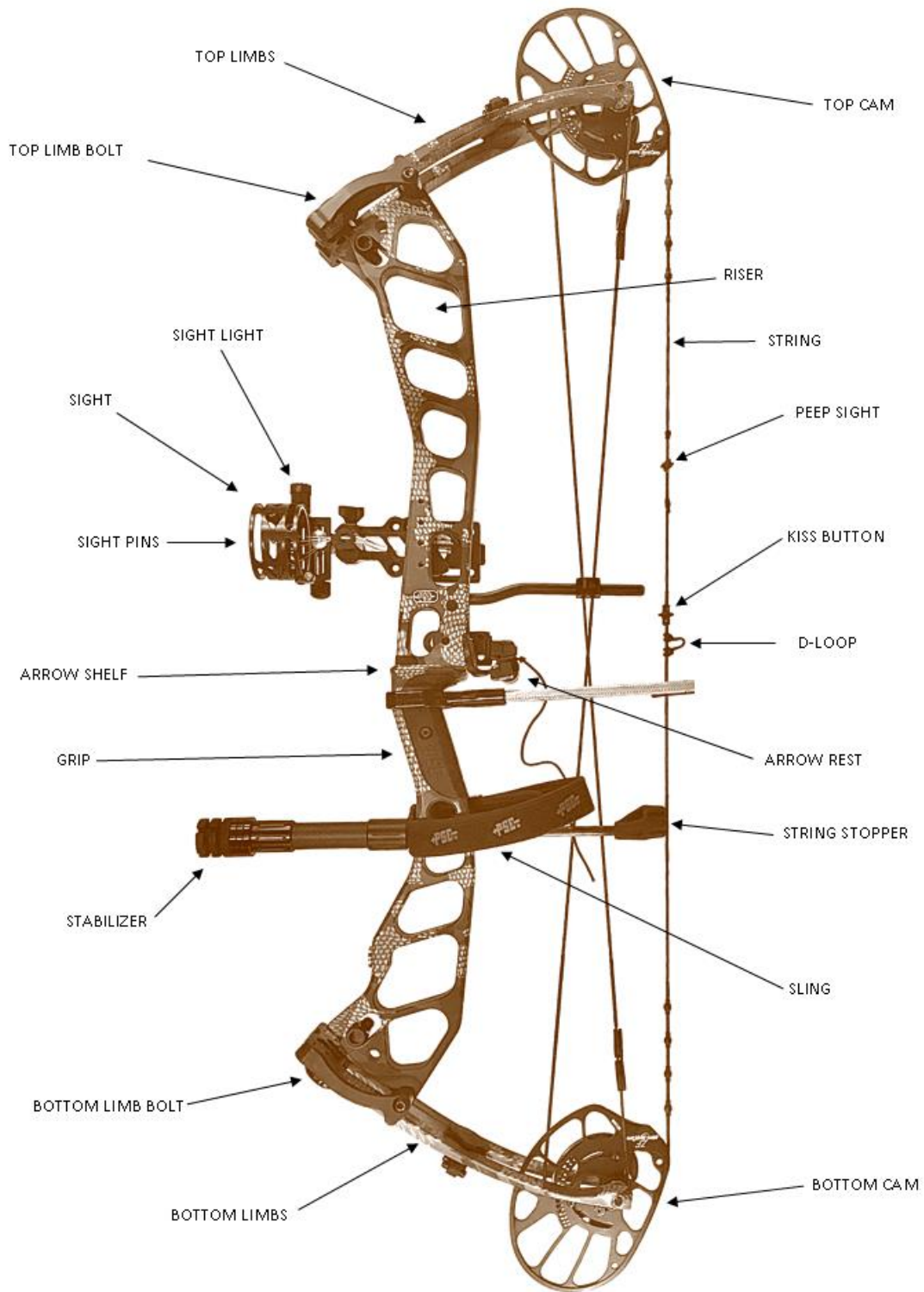


Figure 1: PSE DRIVE NXT side view

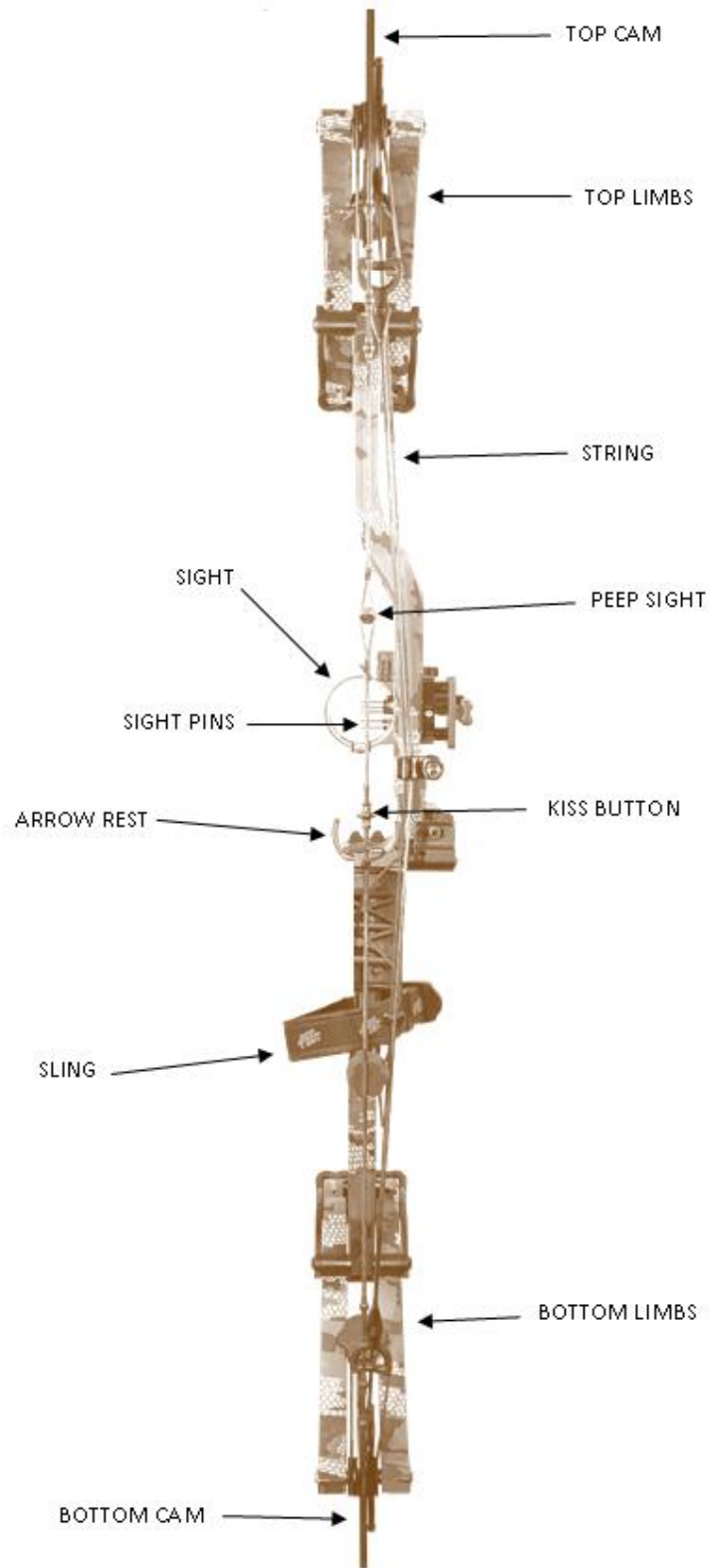


Figure 2: PSE DRIVE NXT rear view

MULTI-PIN SIGHT OPERATION



Figure 3: 5-Pin Sight

SIGHT INTRODUCTION

The sight is a component attached to the riser that assists with accuracy. When operating the bow, the archer can line-up the sight and target in their field of view to direct the arrow's flight when released.

Consistent archery form and equipment are requirements for the sight to work.

SIGHT USE REQUIRMENTS



Figure 4: Archer Form Demonstration

Archery Form

Practice consistent archery technique. A sight cannot be calibrated for inconsistent form. An archer should strive to operate the bow with consistency. When the archer's form is consistent the sight is a reliable point of reference to predict the flight of the arrow.



Figure 5: 31" Carbon Arrows

Arrow Tuning

Use consistent arrows. Arrows must be cut to an archer's draw length to be safely supported by the arrow rest when nocked to the bow string at full draw. Arrows can be modified with arrow heads of different weights (measured in grains). Arrow shafts are categorized by flexibility with a measurement called 'spine.' An arrow's spine must be stiff enough to withstand the force created by the bow. Arrow weight, stiffness and length affect the flight of an arrow. Always use arrows with the same characteristics that are tuned to you and your bow.

Bow Tuning

Tune the bow for one archer. To achieve consistency, the bow should be tuned for one owner. Draw length tuned to the archer affects the alignment of the peep sight and the multi-pin sight. Draw weight affects the speed and distance that an arrow travels.

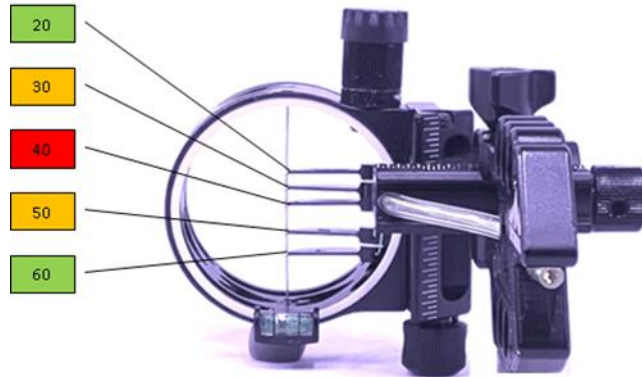


Figure 6: 5-Pin Sight Range Settings

Range Finding

Know the distance of the target when operating the sight. The distance between the bow and target must be known when adjusting the pins in the multi-pin sight. Each pin is set to a different range. Usually, a 5-pin sight is set at 10 yard intervals from 20-60 yards. The top most pin is calibrated for 20 yards and the bottom most pin is set at 60 yards.



Figure 7: Range Finder

A digital range finder can be used to measure the distance between the archer and the target. Without a digital range finder, the sight can be calibrated by estimating the range and then making changes to the sight by trial and error. An archer will experience the best results when operating the bow at a known distance to the target with a sight that is calibrated to that specific range.

Shot Placement and Grouping

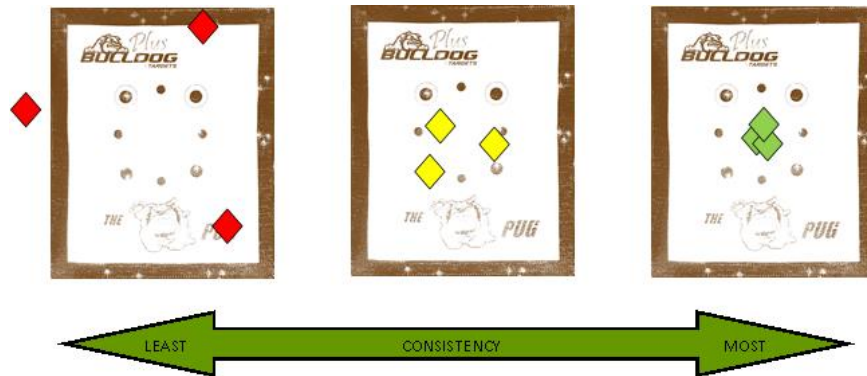


Figure 8: Arrow Placement Groupings

After repeatedly aiming and releasing at a single point, groups of three or more arrows in close proximity on the target indicate consistent bow operation. Close groupings of shot placement are required to determine the direction and magnitude of sight adjustments.

WARNING

A bow can cause life threatening injury. Dry firing will damage the bow. Control the bow direction when drawing the bowstring with a nocked arrow. Always direct the bow downrange, towards a safe target and back stop.

Aiming

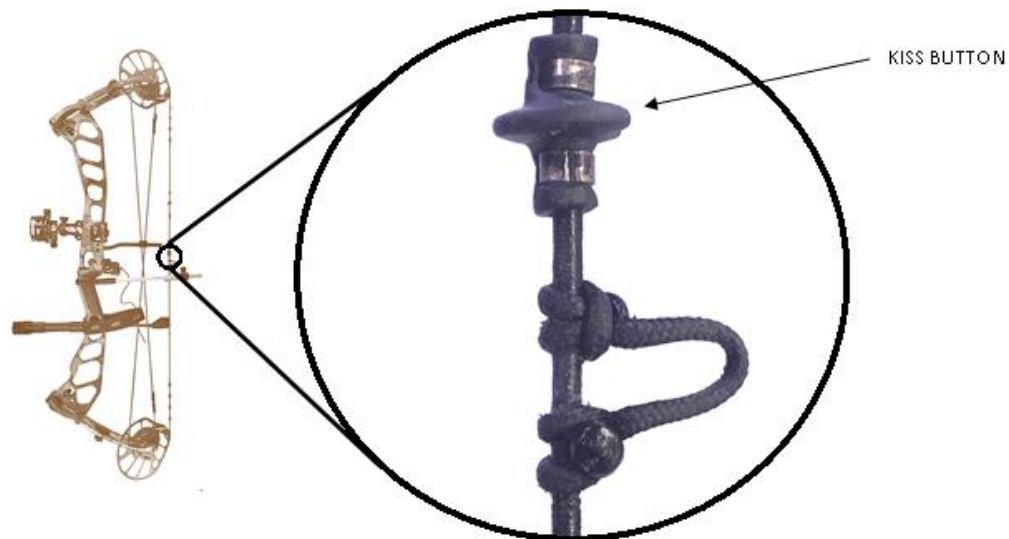


Figure 9: Kiss Button

1.0 When at full draw, position the kiss button at the corner of your mouth closest to the bow string.

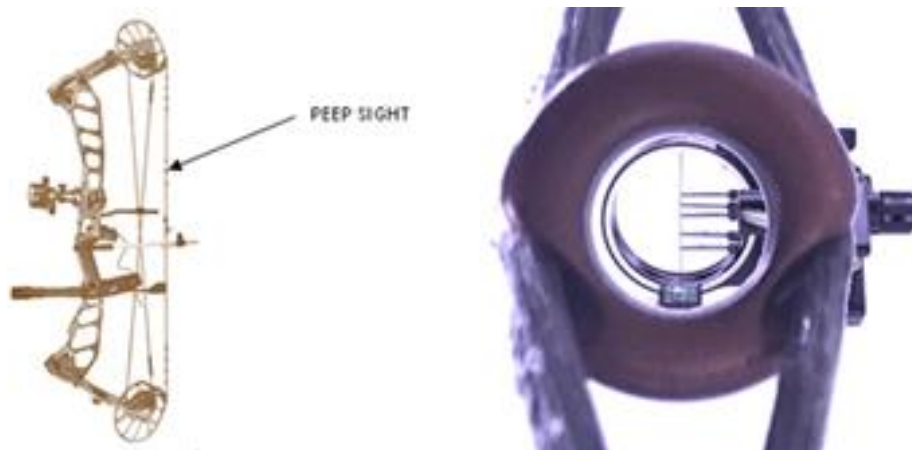


Figure 10: Peep Sight View

2.0 While at full draw and with the kiss button at the anchor point, use your dominant eye to align the peep sight and the multi pin sight in your field of view.

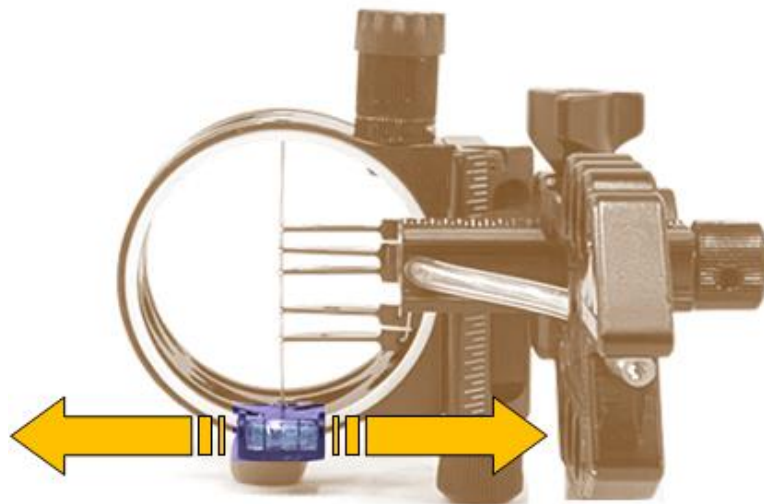


Figure 11: Sight Leveler

3.0 While looking through the peep sight, tilt your bow hand left or right to centre the bubble in the leveler on the bottom of the sight.

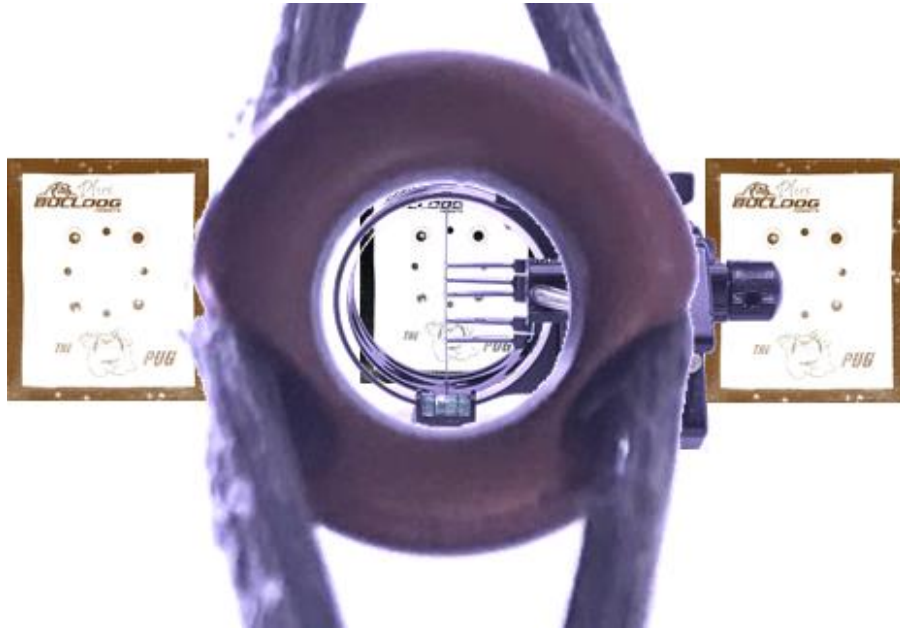


Figure 12: Aim View

4.0 While keeping your arms ridged at full draw, reposition your head and torso to align the peep sight and multi-pin sight level and over the target.

TIP: Consider what effect airspeed and wind direction will have on arrow flight. Reposition the shot placement accordingly.

5.0 When the shot is aligned over the intended target, release the arrow.

Sight Calibration



Figure 13: Range to Target

1.0 Determine the range to the target. Typically, the top pin of a 5-pin sight is calibrated for 20 yards.

1.1 Position the target, 20 yards down range.

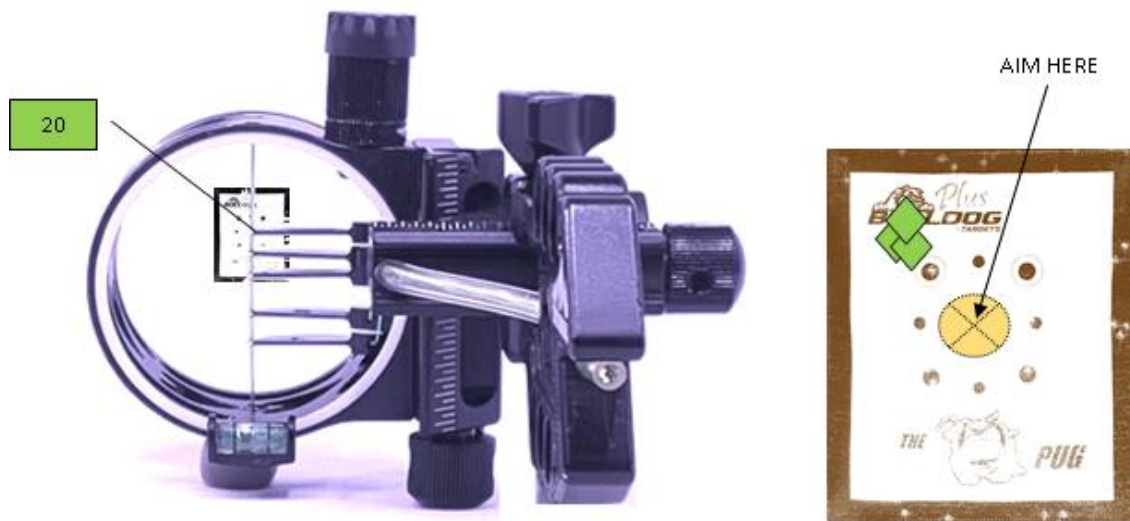


Figure 14: Shot Placement Grouping

2.0 Trial a set of three arrows with the top pin.

- 2.1 While facing a target 20 yards down range, use the top pin of the 5-pin sight to aim for the centre of the target.
- 2.2 Attempt to place every arrow in the same location for each shot.
- 2.3 While following proper archery safety and technique, release a set of three arrows onto the target.
- 2.4 A close grouping of arrows is more important than accurate arrow placement. The sight will be adjusted to direct arrow placement.

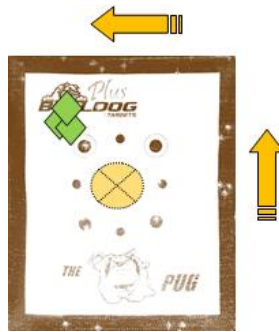


Figure 15: Sight Adjustment Direction

3.0 Determine the direction of sight adjustment.

- 3.1 Use the “follow the shot” principal for sight adjustments.
- 3.2 Plan to adjust the sight up-down or left-right in the direction that follows shot placement.
- 3.3 For example: When a group of shots are placed high, adjust the sight upwards. When a group of shots are placed left, adjust the sight towards the left.

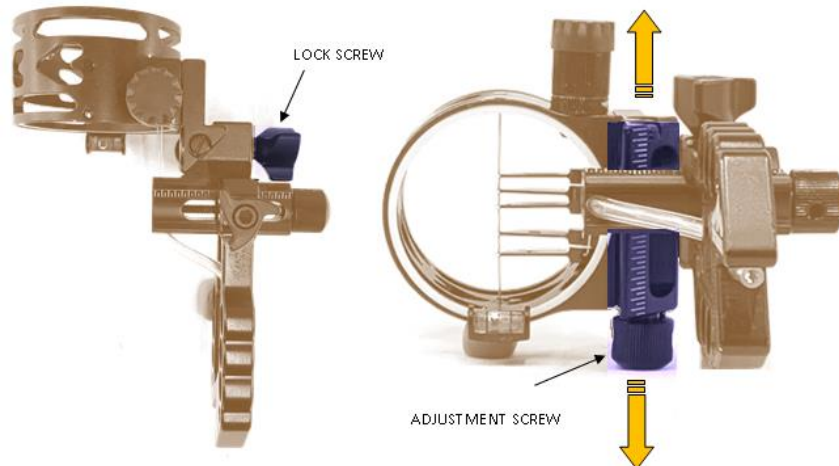


Figure 16: Vertical Sight Adjustment

4.0 Adjust the sight vertically.

- 4.1 With your index finger and thumb, gently turn the side lock-screw counter clockwise to loosen the sight for vertical adjustment.
- 4.2 Turn the bottom adjustment screw clockwise to raise the sight.
- 4.3 Turn the bottom adjustment screw counterclockwise to lower the sight.
- 4.4 Adjust the sight vertically based on the outcome of steps 2.0-3.0.
- 4.5 Turn the lock-screw clockwise to tighten.

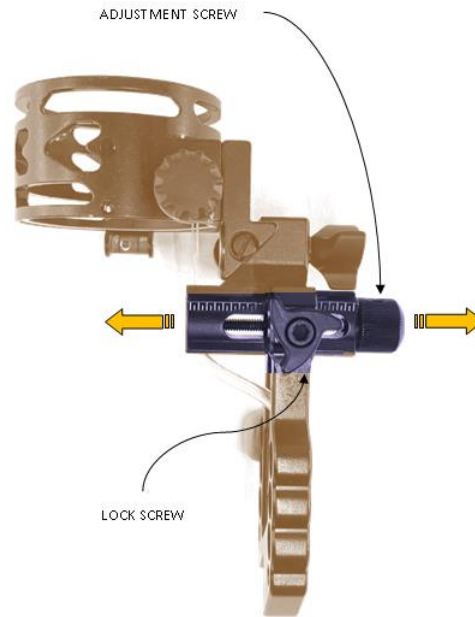


Figure 17: Horizontal Sight Adjustment

5.0 Adjust the sight horizontally.

- 5.1 With your index finger and thumb, gently turn the top lock-screw counter clockwise to loosen the sight for horizontal adjustment.
- 5.2 Turn the side adjustment screw clockwise to move the sight to the left.
- 5.3 Turn the side adjustment screw counterclockwise to move the sight to the right.
- 5.4 Adjust the sight horizontally based on the outcome of steps 2.0-3.0.
- 5.5 Turn the lock-screw clockwise to tighten.

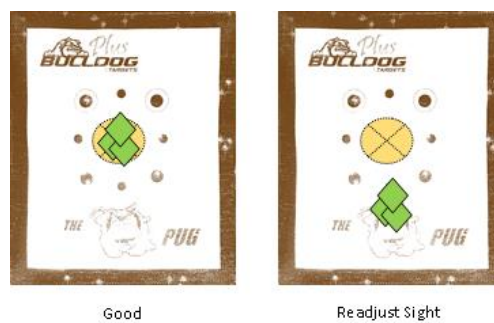


Figure 18: Sight Readjustments

6.0 Trial a second set of arrows.

- 6.1 While facing a target 20 yards down range, use the top pin of the 5-pin sight to aim for the centre of the target.
- 6.2 Attempt to place every arrow in the same location for each shot.

- 6.3 While following proper archery safety and technique, release a set of three arrows onto the target.
- 6.4 If the shot placement grouping is still off target, repeat steps 2.0-6.0.
- 6.5 If the shot placement grouping arrives on target the first pin is calibrated for 20 yards.



Figure 19: 5-Pin Adjustments

7.0 Calibrate the lower pins.

- 7.1 Only make minor vertical adjustments to the lower pins.
- 7.2 Adjust the lower pins for different ranges to target.
- 7.3 Use the second pin to aim at a target 30 yards down range.
- 7.4 While following proper archery safety and technique, release a set of three arrows onto the target.
- 7.5 Adjust the pin vertically if needed.
 - 7.5.1 Use a small Allen wrench to loosen the pin adjustment screw.
 - 7.5.2 Very carefully slide the pin up or down.
 - 7.5.3 Use the Allen wrench to tighten the pin adjustment screw.
 - 7.5.4 Trial another set of three arrows at 30 yards.
 - 7.5.5 Repeat 7.5.1-7.5.5 as needed.
- 7.6 Repeat 7.0 for:
 - 7.6.1 The third pin at a 40 yard target.
 - 7.6.2 The fourth pin at a 50 yard target.
 - 7.6.3 The fifth pin at a 60 yard target.

References

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