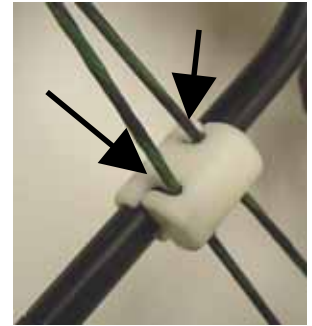
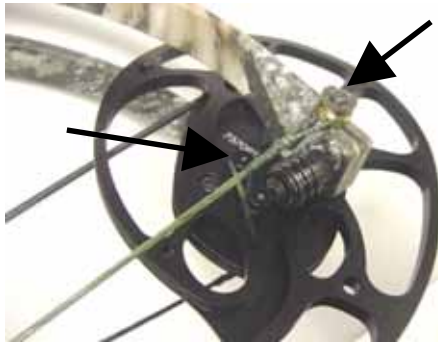


# Compound Bow Set-Up & Tuning Procedure

Rev 02/12/08

1. Remove bow from shipping box. Remove bow from plastic bag and remove the owner's guide and other promotional material from the bow.
2. **Read the Owner's Guide before using the product.**
3. Inspect the bow to insure that the cables and string are in their tracks on the cam and attached to the posts properly. Check all screws and bolts to insure they are not loose, including rubber dampers and cam modules and/or inner cams.



4. Set Draw weight: Adjust draw weight to the desired level by turning the limb bolts clockwise to increase weight and counter-clockwise to decrease weight. Turn both limb bolts equal amounts for the initial setting.



5. Set tiller: Check tiller before making any other adjustments. The distance from the riser to the string, as shown in the photo below, should be the same for both the top and bottom limbs. If the distance is the same, no adjustment is required. If the distance varies more than 1/8", adjust the limb bolts the same amount in OPPOSITE directions until the tiller is correct. For example, if the top limb bolt is turned clockwise a half a turn, the bottom limb bolt must be turned counter clockwise a half a turn. For One-Cam bows, the tiller must be measured by tying a thin piece of string from one axle to the other and using that string to measure tiller.



6. Checking static cam orientation: With the bow at rest, generally the cam orientation marks on the cam should be within a string width of being on the marks when the string is in the center post or the post with the dot. Orientation marks will not line up if the string is on the "+" post or the "-" post of the cam. Timing mark location varies with bow model and draw length. It is important that the timing marks be symmetrical from top to bottom. Example: if the string is to the rear of the timing mark at the top cam it should be approximately the same distance to the rear on the bottom cam.



7. Checking draw stops for bows equipped with a Hybrid Cam System: With the bow at full draw, and the split harness cable making contact with the draw stop on the bottom cam, the control cable should also be making contact with flat portion of the module on the upper cam. Twist or untwist the control cable to adjust the upper cam so that the string contacts the flat correctly.



Draw Stop on bottom cam



Cable makes contact with the flat on the module on the upper cam.

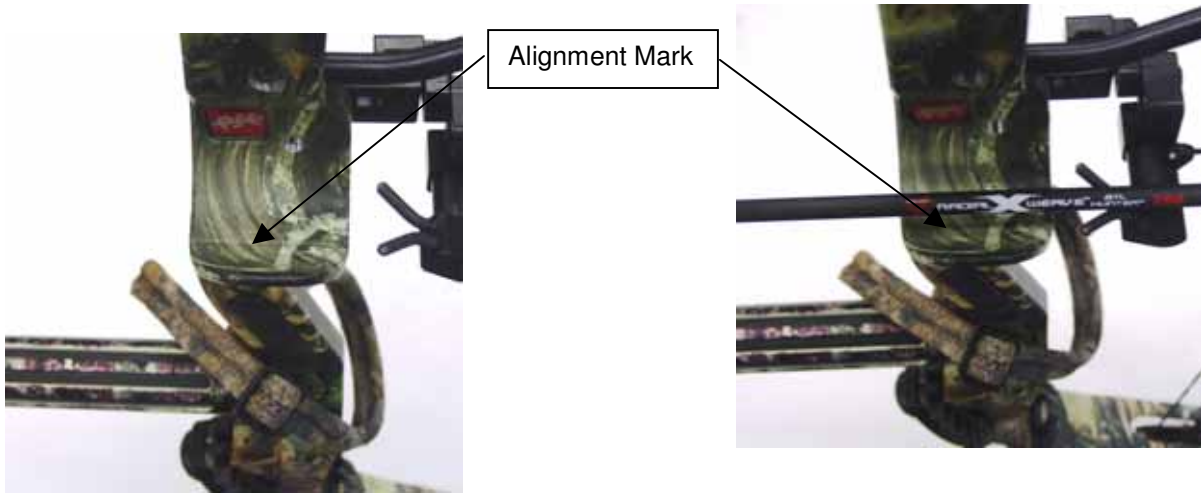
Checking timing for bows equipped with a twin cam system: While drawing the bow, both cams must roll over at precisely the same time. Timing is adjusted by either twisting or untwisting one or both of the cables until cams are synchronized.

8. Recheck steps 5, 6 and 7 in sequence until everything is correct.
9. Install the arrow rest carefully following the instructions for the rest. Mount arrow rest to the bow utilizing the Posi-Lock feature if available.

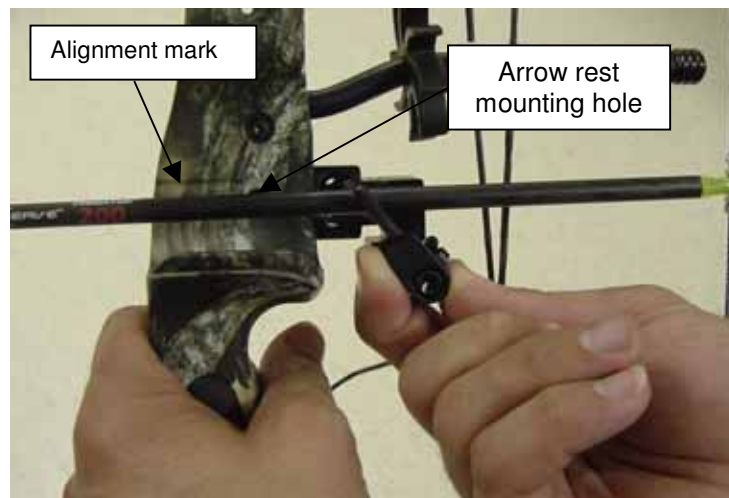


Bows equipped with this slot can utilize the rest's Posi-Lock feature to locate the arrow rest securely into position.

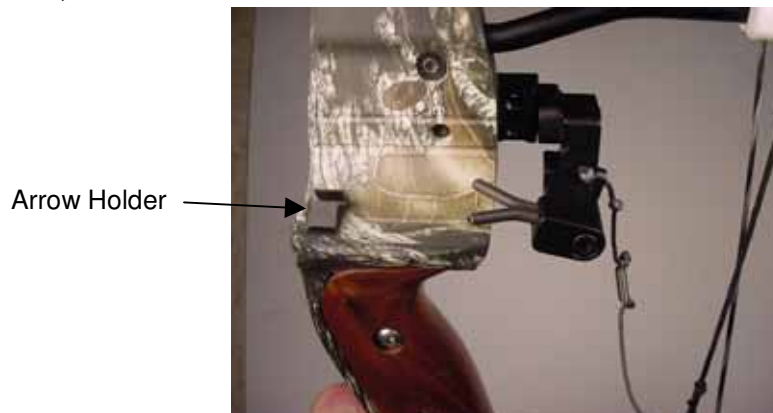
10. For all styles of arrow rests set the center shot adjustment on the rest so that the arrow is parallel to the alignment mark.



11. Using the nocking loop and the rest adjustment, set the arrow horizontal so that it is parallel to the alignment mark on the window of the bow and passes in front of the arrow rest mounting hole.



12. If using a fall-away arrow rest with an arrow holder, clean the mounting area on the riser with alcohol. Then attach the arrow holder to the riser using cyanoacrylate glue, such as Carbon Force Advance Instant Adhesive, so that the arrow rests in the holder when the bow is at rest.



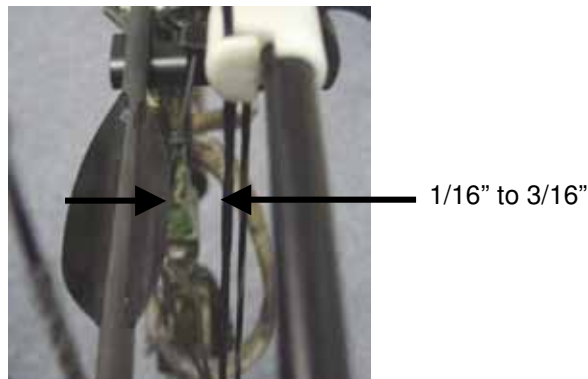
13. For a fall-away rest:

- Tightly serve an area on the downward-traveling buss cable going down a minimum distance of 1¼" starting 1½" below the shelf. This serving prevents the rope from sliding up the cable during use.
- Cut a 5" piece from the rope provided and burn each end into small balls to prevent slippage.
- Tie an overhand knot in one end of the rope and slip the rope through the hole in the rest.
- Tie another overhand knot in the 5" rope 1-1/8" from the first knot.
- Slip the 5" rope through one end of the spring and tie an overhand knot in the end of the rope.
- Burn one end of the remaining piece of rope, tie an overhand knot in one end and slip the rope through the other end of the spring.
- Attach the loose end of the rope below the serving on the cable using a cow-hitch knot.
- Draw the bow to see if the launcher lifts to its most upright position. The rope should be shortened until the rest comes to its full upright position in the last 1½" to 3" of draw.
- Once length is established, cut off excess rope, untie the cow-hitch knot burn the end of the rope into a ball and retie the knot.



14. TM style rests should have the spring tension set so that the rest remains in the full upright position before the bow is drawn back.

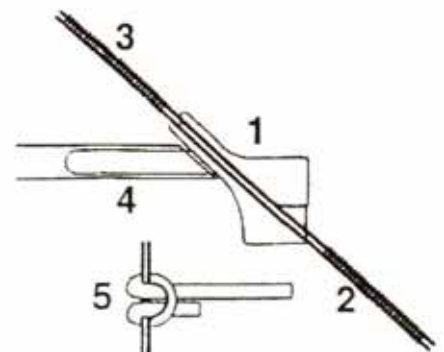
15. Check the arrow vane clearance from the cables prior to final setting of arrow rest and adjust the cable guard so that there is between 1/16" and 3/16" clearance. Recheck arrow rest settings.



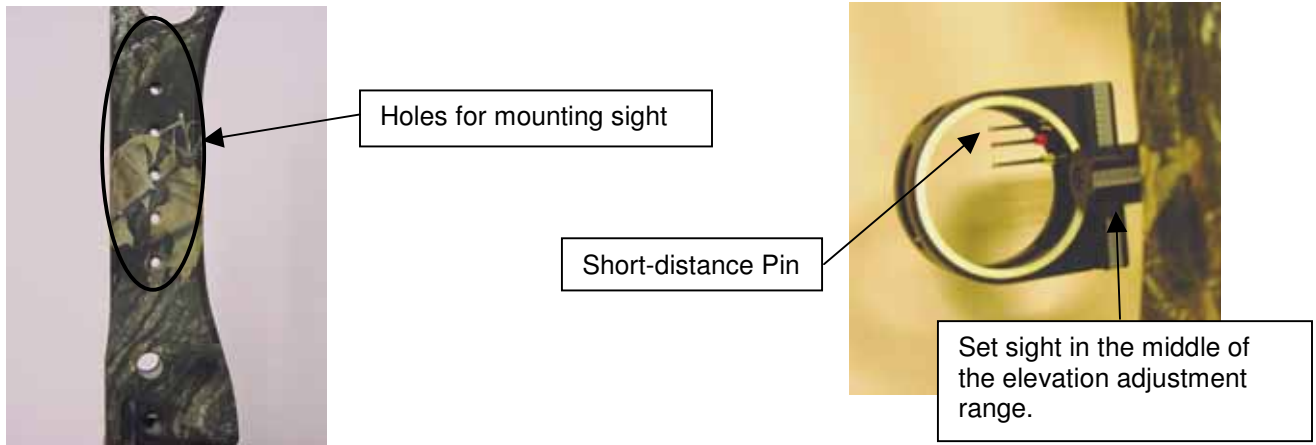
16. Set peep height and tie in the peep. Tie in the peep with serving material. Slide the peep either up or down so that it is approximately even with the eye when the bow is in the fully drawn position.



1. Insert the peep through the string halves and slide to the desired location
2. Use the nylon serving provided to serve below the peep.
3. Next, serve above the peep.
4. Cut hose length so that is slightly taut when stretched from the peep at full draw to the cable nearest the string. Push the hose onto the peep so that it completely covers the rod.
5. Tie the hose to the cable nearest the string using a lark's head knot.



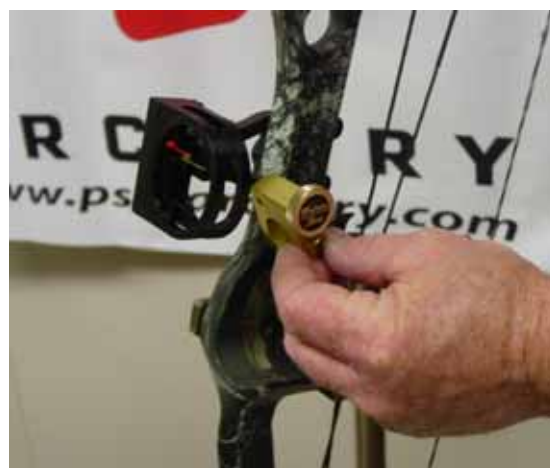
17. Install the sight following carefully the instructions provided with the sight. Some bows are equipped with multiple holes for mounting the sight. Select the set of holes that allows the short-distance pin in the sight to be toward the top of the sight when viewed through the peep sight with the sight in the middle of its vertical adjustment range. This allows for use of multiple pins.



18. Secure the bow in a bow vise in a level position. Adjust the bow so that it is level. Place a leveling device on a flat surface of the sight mounting bracket. With the bubble in the leveling device centered, adjust the sight so that the bubble in the sight is centered.



19. Adjust the third axis of the sight. Check the third axis leveling by tilting the bow forward. The levels on the sight and the riser should still be centered. Then tilt the bow to the rear and make the same check.



20. Install the sling and stabilizer.



21. Recheck all screws and bolts to insure tightness.



After the bow is set up it must be tuned to be able to achieve maximum accuracy. The following is a guide to tuning your bow:

## PAPER TUNING

These paper tuning instructions will assist you in achieving good arrow flight. Even though paper tuning is not the end-all method of gaining perfect arrow flight, it is a guideline and a good starting point for achieving that goal.

To begin paper tuning your bow you must set up a frame covered with paper. Newsprint or other large-sized paper will work fine. Make sure your backstop is far enough behind the paper to allow the arrow to pass completely through the paper. For your first test stand about 10 feet away from the paper. Make sure the arrow is level when shooting. After you have made your test shot, compare the hole in the paper with the following samples:

**Note:** The following corrective steps apply to release aid shooters and are only the common causes for arrow flight problems. Procedures differ for finger shooters.

**High Tear:** If the fletched end of the arrow tears the paper above where the tip penetrates. This may indicate that:

- **Vane clearance problem.** Check to see if vanes are making contact with the arrow rest.
- **Nocking point too high.** Place nocking point lower on the string.
- **Wheel timing may be off.** Check timing.
- **Arrow rest launcher may be too stiff.** Following the arrow rest instructions, reduce spring tension.
- **Tiller may be off.** Check tiller and adjust as necessary.
- **Inconsistent shooting form.** Have your shooting form and technique checked by a qualified archery coach.
- **Drop-away rest coming up too early.** Adjust the length of the length of the rope so that the rest will drop sooner



**Low Tear:** If the fletched end of the arrow tears the paper below where the tip penetrates. This may indicate that:

- **Nocking point too low:** Place nocking point higher on the string.
- **Wheel timing may be off:** Check timing.
- **Tiller may be off:** Check tiller and adjust as necessary.
- **Inconsistent shooting form.** Have your shooting form and technique checked by a qualified archery coach.



**Left Tear:** If the fletched end of the arrow tears the paper to the left of where the tip penetrates. This may indicate that:

- **Arrow rest is adjusted too far to the left.** Adjust arrow rest to the right.
- **Arrow shaft is too stiff** (right handed archers): Although very unlikely, it is possible that the spine of the arrow shaft is too stiff. Using an arrow selection chart, select an arrow with the proper spine or increase draw weight of the bow. For left-handed archers: Arrow shaft too weak.
- **Arrow making contact with the cables.** Adjust cable guard to achieve more clearance.
- **Inconsistent shooting form.** Have your shooting form and technique checked by a qualified archery coach.



**Right Tear:** If the fletched end of the arrow tears the paper to the right of where the tip penetrates. This may indicate that:

- **Arrow rest is adjusted too far to the right.** Adjust arrow rest to the left.
- **Arrow shaft is too weak** (for right-handed archers): Although very unlikely, it is possible that the spine of the arrow shaft is too weak. Using an arrow selection chart, select an arrow with the proper spine or reduce draw weight of the bow. For left-handed archers: Arrow shaft too stiff.
- **Cable guard adjustment too far out.** Adjust cable guard to achieve proper vane clearance.
- **Inconsistent shooting form.** Have your shooting form and technique checked by a qualified archery coach.



**Angular Tear:** If the fletched end of the arrow tears the paper at an angle to where the tip penetrates, this indicates that there is more than one problem with the adjustment of the bow or accessories. Using the above tear pattern instructions, make adjustments until a horizontal tear is corrected and then make adjustments to correct the vertical tear.



**“Bullet” Hole:** When the fletching enters perfectly around the hole made by the arrow tip, the bow is ready to shoot. Further “fine” tuning may be desired.



## FINE TUNING

Paper tuning the bow is a good starting point. The bow is not truly tuned until it groups. To add a final “fine” tune to the bow:

- At 20 yards from the target, shoot at a dot and adjust the sight until you group your arrows around the dot.
- Hang a plumb bob on one of the arrows in the center of the group (Figure 1).
- Back up to 30 yards (or more). Still using the 20-yard pin shoot another group of arrows at the same dot. The arrows are going to hit low.
- If the arrows hit to right of the plumb bob string (Figure 2), move the arrow rest in small increments to the left until the arrows are hitting within  $\frac{1}{2}$ " of the string for the intermediate shooter and  $\frac{1}{4}$ " for the advanced shooter. If the arrows are hitting to the left of the plumb bob string (Figure 3), do the same thing only moving the arrow rest in small increments to the right.
- Go back to 20 yards from the target and shoot at 1-inch wide horizontal line (Figure 4) to measure the height of the group. If the group is taller than  $1\frac{1}{4}$ " for the intermediate shooter and  $\frac{3}{4}$ " for the advanced shooter, put  $\frac{1}{8}$  of a turn in the bottom limb bolt and shoot again. Very rarely will more than  $\frac{1}{8}$  of turn be needed.



Figure 1



Figure 2



Figure 3



Figure 4