

# 2006 OWNER'S MANUAL



 **DIAMOND**  
BY BOWTECH

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## THANK YOU

Congratulations on the purchase of your Diamond compound by BowTech. Your new Diamond is designed to provide quick, silent accuracy that no other bow manufacturer can match. The performance of every Diamond bow is backed with a lifetime warranty and is guaranteed to provide you with many successful hunts. We encourage you to take time to register your bow online at [diamondarchery.com](http://diamondarchery.com) or by mailing the enclosed card.

As with any weapon, the safe operation of your bow should be the highest priority. Please use it carefully!

## BIRTH CERTIFICATE

Every Diamond bow has completed a comprehensive check and balance process. They have been hand shot, tested and measured to ensure compliance with our strict performance standards.

Performance testing is completed using a Custom Chrono, Heavy Duty ProShop Meter and digital scales. Speed ratings have been obtained with factory installed brass nock and Hush Kit\*. The use of these accessories decreases velocity by 5-8 fps.

Final factory test results are documented in writing and attached as a "Birth Certificate" to every bow shipped.

IBO speed ratings are the industry standard and are calculated by shooting a 350-grain arrow using a 70# bow with a 30" draw. Speeds for the Rapture Lite are achieved using a 300-grain arrow shot at 60# with a 27" draw. Speeds for the Rascal are achieved using a 200-grain arrow shot at 40# with a 25" draw.

\* The Hush Kit is comprised of VibraBlocks™, String Silencers and cable muffler. Digital scales used for peak draw and arrow weights have a variance of +/- 1%. Mass bow weights are taken with Hush Kit and VibraBlocks™ installed.

# SOLITAIRE CAM, FREEDOMCAM & RASCALCAM - SETUP & TUNING

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Diamond solitaire cam bows are unique in that they use a slotted draw stop that allows infinite adjustment instead of the limitations of preset drilled holes. Adjusting these cams to your preferred shooting style can be a relatively easy task by following the owner's manual instructions. The solitaire cam is modular adjusted, so when changing the draw length module, it is also necessary to readjust the post setting. Draw length modules are available in 1/2" increments on all models except the Victory Dual Cam, which is available in 1" increments only.

Diamond single cam bows are factory tuned and preset to the ordered specifications. Any alterations to the original factory setup could inhibit performance. You may need to reset your draw to the correct length. Use the module that best meets your individual draw length before attempting to fine tune your let-off. See your Authorized Diamond Dealer for proper draw length adjustment and new module installation instructions.

## Setting the Peak Weight

Peak draw weights are adjustable approximately 10 pounds downward depending on the model. When adjusting draw weight on models without pivoting limb pockets, one full 360-degree turn on both limb bolts equals 2-5 lbs depending on the bow model. Do not turn limb bolts more than 2-1/2, 360-degree turns. All bows perform best at peak weight. Diamond bows are standardized to fit most manufacturers' accessories and will perform best when shot with a mechanical release.

## Post Adjustment

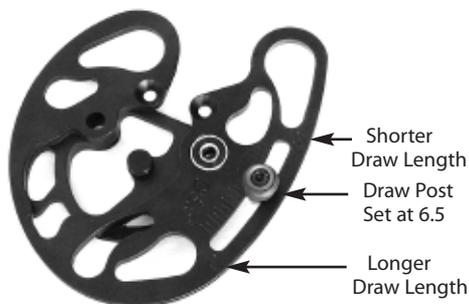
The post settings are designed to make minute changes in increments as small as 1/6" in draw (up or down) from the draw-length originated by the module. Move the draw post to customize the module for your individual draw length, stopping the cam rotation exactly where you want it. The post rotates until it comes into contact with the limb of the bow, resulting in the most solid wall on the market and the most precise anchor point available.

Start by adjusting the Allen screw on the post. Loosen just enough to allow movement either toward the S (short) or L (long) markings on the cam. **WARNING: NEVER ATTEMPT POST ADJUSTMENT WHILE DRAWING THE BOW.** When adjusting the post, very little movement is required to dramatically affect the settings. **DO NOT OVER OR UNDER ADJUST.** Under adjustment results in a very low let-off, while over adjustment causes the cam to over rotate and the cable to contact and bend over the cam's axle before the post stops the total rotation. This will cause excessive cable serving separation. Never move post more than 1/2 mark from factory settings. Doing so will effect performance.

Post adjustment incorporates all the settings necessary for Diamond models using the Solitaire Cam. Improper adjustment results in performance inefficiencies and can be dangerous. When drawing the bow, make sure that the post stops the draw cycle. If the post does not stop the draw cycle, the cam is over-rotating and it will cause damage to the cables. Correct any over-rotation by moving

## SETUP & TUNING CONT.

the post setting toward the S marking. In doing so, you will return to the correct let-off and valley. Your Authorized Diamond Dealer can assist you with proper post adjustment. (See illustration below.)



**NOTE:** To set a longer draw length, you may need to install a different module in order to maintain maximum shooting efficiency.

## STRINGS, CABLES & TUNING

Your Diamond custom bowstring is manufactured to provide long string life and absolute consistency, shot after shot. This results in greater accuracy, and less time spent re-tuning your equipment.

It is recommended that you cycle the bow 100-150 times to remove shrinkage from the string as a result of relaxation during packaging and shipping. Separate the bowstring and install your peep sight. To properly align the peep sight, simply twist the string from the bottom in 1/2-turn increments until the peep sight aligns. In rare cases, this procedure may need to be repeated after cycling an additional 200 shots.

**Wax the string often.** We recommend BCYML 6 synthetic string wax or an equivalent product. To wax the string, apply wax

## CHANGING THE LET-OFF

Changing the let-off is accomplished with ease. It may require a post setting and/or a module change. The draw stop affects the bow's let-off by stopping the rotation of the cam on the module track before it over rotates and before the cable contacts the axle. Let-off can be adjusted from 65% to 80%.

**NOTE:** Post settings adjustments allow fine tuning to achieve individual draw length requirements, however adjusting the draw length will affect the let-off and valley at the same time. Achieving an exact let-off at a specific draw length may require some trial and error of minor modifications and/or the use of a scale. See your Authorized Diamond Dealer for assistance.

liberally to entire length of string. Rub briskly with fingers until the string appears slick. Remove all excess wax with a clean cloth. We recommend that you wax every other time you shoot your bow to lengthen the life of your string and cable sets.

For optimum performance and correct timing, your Diamond is factory preset with the correct distance between the module screw and the limb. Contact your dealer for specific timing gaps for each bow model.

There are factory installed speed nocks located on the string at various distances from the axle(s). These nocks enhance the speed and performance of the bow. Installing additional, removing, or changing the location of the factory installed speed nocks will reduce performance and speed.

## STRINGS, CABLES & TUNING CONT.

Contact your Authorized Diamond Dealer for adjustment assistance and to purchase authorized Diamond replacement parts. Installation of non-authorized Diamond components could void your warranty.

## ABOUT SPEED

### How Do Manufacturers Rate Speed?

IBO Speed Ratings are an industry standard of measurement used by all manufacturers. Speed ratings are based on a bow produced with a draw weight of 70# and a draw length of 30" using a five (5) grain per pound arrow (350 grain). Any deviation from these settings causes a drop in arrow velocity. **NOTE:** The chart below is a general guide for the amount of speed lost when accessories are added to your string.

String Accessory	Speed Loss
Brass Nock	2 - 4 fps
Peep Sight	3 - 6 fps
String Silencers	2 - 6 fps
E-Buttons	2 fps each
Rubber Peep Tube	6 - 10 fps
String Loop (without brass nocks)	1 - 3 fps
VibraBlocks	0 - 2 fps

Speeds vary depending on placement and manufacturer of string added accessories. Speed loss of arrows over the IBO standard of five (5) grains per pound (350 grains @ 70# draw weight):

Every 3 grains of added arrow weight results in 1 fps speed loss. Example: 30 grains over IBO results in 10 fps speed loss.

## BOW MAINTENANCE & TROUBLE SHOOTING

◆ Replace the string and cables once a year or every 2,500 shots, whichever comes first, to maintain optimum performance.

◆ Examine your bow for wear and tear before you shoot (axles, bushings, cables, cable slide, e-clips, and string). If any one of these items shows excessive wear, contact your Authorized Diamond Dealer to have them install new Diamond replacement parts. This keeps your bow shooting consistently without voiding your warranty.

◆ When adjusting the bow's draw weight on dual cam bows, always keep the bow at even tiller. Tiller is the distance between the string and the point where the back of the limb joins the riser. The tiller at both the top and bottom should be equal. If the top or bottom tiller is off by as little as 1/8", the bow's performance may be affected.

◆ When adjusting the bow's draw weight, do not turn the limb bolts out more than 2-1/2 full turns. Each full revolution of the limb bolt equals about 2-5 lbs depending on bow model.

◆ **WARNING: DO NOT TURN THE LIMB BOLTS OUT MORE THAN THE RECOMMENDED AMOUNT. Doing so could cause the limbs to break out of their pockets and result in bodily injury.**

◆ Proper lubrication of the axles and limb pockets limits wear and tear. Add enough lubricant to these areas to create a barrier between each working part and to optimize the performance of the bow. **NOTE:** Only industry standard lubricants should be used. **DO NOT USE WD-40.**

## BOW MAINTENANCE & TROUBLE SHOOTING CONT.

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- ◆ It is important to make sure module screws are properly installed with Loc-Tite. Warranty **DOES NOT** cover module screws that loosen and cause limb damage.
- ◆ Inspect your cam position on a regular basis to make sure the factory setting is maintained. This ensures the draw length and draw weight remain consistent.
- ◆ All Diamond bows use AMO standards for measuring draw lengths, (measured from the pivot point, or throat, of the grip to the bottom of the valley) plus 1-3/4".
- ◆ Always use a properly spined arrow for this bow with a minimum weight of five (5) grains per pound (IBO standard). An arrow with legal IBO weight is not necessarily properly spined. The bow must be able to transfer its energy to the arrow without any loss. Likewise, the arrow spine must be able to absorb the bow's energy. If the arrow is not properly spined, it will kick out, lose speed, and have poor flight. If the arrow is properly spined, it achieves true, straight flight with maximum speed. Use an arrow chart to determine what shaft is needed to fit the specifications of your bow.
- ◆ Make sure the weight of the arrow tip is matched to the arrow's shaft strength. If the weight of the tip is too light or too heavy, poor arrow flight occurs. Use an arrow chart to find out what tip weight is needed to match the arrow shaft. Try to maintain 7% to 10% forward weight for your tip selection.
- ◆ The arrow nock should be 3/16" to 3/8" above the center of the T-square, depending on the shaft diameter. This is a good starting point to achieve proper arrow flight.
- ◆ Make sure the cams are properly tuned as instructed in the tuning section of each model in this owner's manual.
- ◆ Any accessories added to the bowstring cause the bow to lose speed. All speed tests are done only with factory specs.

**If you need assistance with setting up, tuning, or solving an arrow flight problem, contact your Authorized Diamond Dealer.**

# LIFETIME WARRANTY

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All Diamond bows are backed with a Lifetime Warranty to the original owner. The following exclusions apply.

## Exclusions

◆ **Original Owner.** Warranty applies to the original owner only, is non-transferable and does not apply to internet sales.

◆ **Components Not Covered.** Cables, strings, bearings, paint and/or film dipped finishes are not included in warranty.

◆ **Damage Not Covered.** Damage caused by abuse, mishandling, dry-firing, alteration or modification to original product, or shooting of arrows less than five grains per pound of draw weight will render the warranty void.

◆ **Warranty Card.** For the Warranty to be in effect, the Warranty card must be completed and properly returned to Diamond, with a copy of the purchase receipt, within 30 days of purchase.

◆ **Authorized Dealer.** The Diamond Warranty covers only bows bought from Authorized Diamond Dealers and not from Internet sales. Contact Diamond to confirm that the person you are buying from is an authorized dealer.

## Turn Around Time

Our goal at Diamond with all warranty returns is to have the bow shipped out the door within 72 hours of receiving it in our facility. You are our greatest asset and we will give you the highest quality, most efficient service in the industry.

## Warranty Service

All products returned for warranty service

need to be returned to the dealer first for inspection and determination of any problem. Your sales representative or a customer service representative can help you determine if factory service is required or if your Pro Shop can repair the problem. The bow owner is responsible for the return freight to Diamond, and Diamond will in turn, pay for the return freight of the repaired product. In the event that a bow must be returned for factory service, a Return Authorization (RA) number must first be obtained through your dealer.

Bows returned to the factory without an RA number will be refused. All bows must include the following:

- ◆ A large, readable RA number on the outside of the box.
- ◆ A copy of the sales receipt, if previously sold.
- ◆ Must be sent freight prepaid. No COD shipments will be accepted.
- ◆ Do not include accessories unless otherwise instructed. Diamond will not be responsible for loss or damage to any accessory left on the bow when shipped.
- ◆ All methods of shipping by UPS or FED-EX only. Sender should insure all shipments.
- ◆ If your bow cannot be repaired, we reserve the right to replace your bow with a newer model.
- ◆ Diamond reserves the right to make parts substitutions on warranty coverage at Diamond's sole discretion and for any reason.

## SAFETY & GENERAL INFORMATION

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**BEFORE USING YOUR NEW DIAMOND, READ AND UNDERSTAND THE FOLLOWING MATERIAL OUTLINED IN THIS MANUAL. FAILURE TO FOLLOW ANY OF THESE WARNINGS AND INSTRUCTIONS CAN DAMAGE THE BOW AND MAY CAUSE SERIOUS INJURY TO YOURSELF AND/OR OTHERS.**

Your new Diamond bow is a highly tuned, precise shooting machine. It requires special care and handling to achieve and maintain peak performance. The string, cables, and limbs are under extreme tension, which create an incredible source of energy that must not be taken for granted. Please respect this power and use it properly.

### **WARNING:**

#### **Never Dry Fire the Bow**

NEVER draw a bow without an arrow nocked. Doing so could cause personal injury and/or damage the bow. When drawing a bow for inspection or demonstration, never release the string at full draw to let down. Hold onto the string and do not let it slip out of your hands. Without the resistance of a properly weighted arrow to absorb the energy, you may damage the bow and cause personal injury to you and others.

#### **Adult Supervision Required**

**ADULT SUPERVISION OF ALL CHILDREN UNDER THE AGE OF 18 IS REQUIRED.**

Diamond has designed your bow to be a safe and fun product. However, as with any shooting style product, safety rules must be observed. It is HIGHLY recommended that these rules be read before using any bow.

Bows and arrows are NOT toys. For maximum safety and enjoyment, always

exercise caution, common sense, and safety rules when shooting any bow.

ALWAYS use an appropriate backstop for maximum safety. An appropriate backstop must be constructed of a durable material and must extend beyond the perimeter of the target. The recommended backstop size is determined by the accuracy and ability of the shooter. The lower the level of accuracy, the larger the perimeter required.

NEVER aim or draw any bow in the direction of a person. Aim and draw ONLY in the direction of an appropriate target. ALWAYS have a full view of the path to the target and beyond when shooting.

**NOTE:** Lead-off shots should be taken at closer ranges until the shooter is more accurate and comfortable at longer distances.

ALWAYS inspect arrow and fletching prior to shooting for imperfections such as cracks, splits, or splinters. Damaged arrows must not be used and should be destroyed.

NEVER retrieve arrows or allow anyone else to do so until all arrows have been shot.

NEVER draw the bow without properly adjusted limb bolts (no more than 2-1/2 turns off peak weight). Make sure the cables and string are properly attached to the correct post and in the correct tracks in order to avoid possible injury.

**DO NOT** attach anything to the cables or string that could cause them to wear or become cut. This will void the warranty.

**DO NOT** cross cables above the cable rod. This will have an adverse effect on performance and shootability.

## SAFETY & GENERAL INFORMATION CONT.

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Any alteration from the factory specifications or the adjustments outlined herein will void the factory warranty. ALL maintenance must be performed at an Authorized Diamond Dealer.

### Disclaimer of Liability

By accepting a Diamond archery product, buyer agrees to hold harmless Diamond

and all associated parties from liability for any damage to persons or property, which may result, for any reason, from the use of this product.

If you have any questions about the safety or use of any Diamond product, contact an Authorized Diamond Dealer or call Diamond direct at (541) 689-2920.

## OWNER'S RECORD

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Date of Purchase: \_\_\_\_\_ Purchase Price: \_\_\_\_\_

Bow Model & Year: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Brace Height: \_\_\_\_\_

Draw Length: \_\_\_\_\_ Draw Weight: \_\_\_\_\_

IBO Speed Rating: \_\_\_\_\_ String Length: \_\_\_\_\_ Cable Length: \_\_\_\_\_

Dealer Purchased From: \_\_\_\_\_

Dealer's Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone No: \_\_\_\_\_

Email Address: \_\_\_\_\_

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