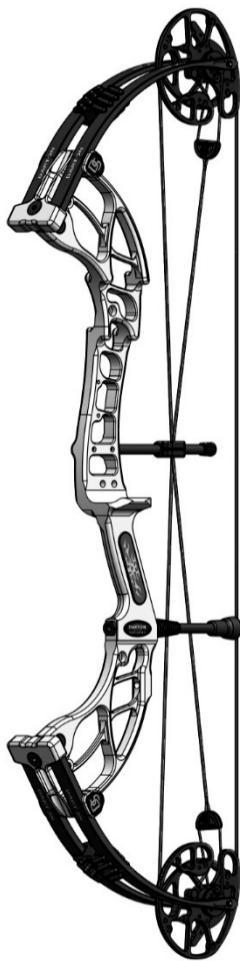


# DARTON

## ARCHERY

DUALSYNC COMPOUND BOW INSTRUCTIONS & SAFETY MANUAL



**Read and follow all safety warnings and instructions in this manual.  
Retain instructions and safety manual for future reference.**

Safety Warnings • Usage Instructions • Warranty

Questions? 1-989-728-9511  
[WWW.DARTONARCHERY.COM](http://WWW.DARTONARCHERY.COM)

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## INTRODUCTION

Thank you for the purchase of your new Darton DualSync Compound Bow! With proper care and maintenance, your Darton bow will provide years of trouble free service. This bow has been designed, manufactured and tested for safety and performance when used in accordance with the instructional materials provided. Before you begin shooting, read and understand the information contained in this manual thoroughly. Without proper working knowledge or understanding of your bow's operation, you could damage your bow or cause serious injury to yourself or others. If any part of this manual is unclear, contact a customer service representative at 1-989-728-9511 for assistance. After thoroughly reading and understanding this material save for future reference.

## FACTS YOU MUST KNOW BEFORE YOU SHOOT YOUR BOW

**CAUTION - IMPROPER USE OF YOUR BOW COULD CAUSE SERIOUS PERSONAL INJURY.**

**WARNING** - Never release the bowstring from a drawn position without an arrow attached to the string and on the arrow rest, referred to as a dry fire. When a bow is dry fired, all the stored energy is transferred violently back into the bow. This action may cause serious damage to the bow, and it could cause personal injury to the shooter and/or bystander. Dry firing your Darton bow will void the warranty.

- Read, understand and heed all warnings and instructions including the owner's manual before attempting to use the bow.
- Never allow children to use a bow without adult supervision.
- Do not use an arrow that is too short to remain on the arrow rest when the bowstring is fully drawn.
- Periodic inspection of the bow and its components is required for safe operation. Replacement of worn or damaged parts is necessary. The bow string and cables require special attention in this respect.
- Do not shoot a bow with a damaged arrow rest or frayed bowstring.
- Do not use an arrow lighter than 5 grains per pound of peak bow draw weight as repeated use may cause damage to the bow and/or injury. An example would be a 300 grain arrow being shot from a 60 pound bow ( $5 \times 60 = 300$ ).

- Always use a “double pull” bow press when performing maintenance that requires the use of a bow press. Do not use a bow press that holds the bow only at the grip area of the handle.
- When using a bow press, do not over-stress your Riser or Limbs as damage to the bow and/or personal injury could result. Be sure to leave as much limb as possible to bend as you compress the bow. Don’t bend the limbs any more than necessary to relieve the tension from the string and cables as damage to the limbs could occur and cause possible injury. **Always back the limbs out at least 4 turns from being tight before putting the bow in a press.**
- Do not back the limb bolts out more than the recommended number of turns as noted for each bow model to decrease peak draw weight; doing so could damage the limbs and limb sockets.
- The use of safety glasses is strongly recommended when handling or operating the bow.
- When letting down a bow from the drawn position do so slowly and be prepared for a possible sudden change in force.
- Excessive offset of the cables may result from use of non-standard replacement cable slides causing possible damage to cables and/or injury.
- Do not expose your bow to extreme heat or leave your bow in a vehicle during hot weather for extended periods of time. **Loosen limb bolts a total of four turns when storing the bow for extended periods.**
- Do not torque limb bolts too tightly, since damage to the underside of the limb may occur.
- Inspect your bow frequently for frayed string or cables and replace accordingly.
- Do not expose the bowstring and cables to sharp edges of any type.
- Be careful of protruding elements and accessories such as the cable guard and quiver when operating the bow.
- Do not draw your bow when a draw length module is removed or loose.
- Do not touch or place fingers near wheels or cables while a bow is in use.
- Do not modify the bow in any way to increase draw weight or draw length over its designed and published limits.
- Wax your Bowstring, Power Cables and Yoke Cables often, especially during heavy use.
- Any bow can be dangerous and cause injury if released by the bow hand during any part of the draw cycle before the arrow is released.
- Always use a bow sling when drawing the bow. (Alternative - Maintain a grip on the bow handle)
- Do not draw the bow beyond its maximum draw length.
- Make certain that the target area and path to and in back of the target are clear before shooting.
- Do not shoot an arrow straight up or in any other direction that can endanger persons or other objects.
- Do not point or aim a drawn bow at another person.
- Do not allow the bow limbs to strike any obstacle when the bow is being operated.
- The practice of altering or modifying the bow or components from the original manufacturer’s specifications in any manner may place the user and others at serious risk and will void the manufacturer’s warranty.
- Check all mounting screws for tightness after first few shots.
- Check frequently all module screws to be sure they are tight.

#### **Arrows:**

- Select arrows using the manufacturer’s arrow selection charts or other credible sources. Make certain that the arrows used meet minimum recommended weight requirements.

- Make certain that the arrows used are of proper length and stiffness for your draw weight and draw length.
- Inspect each arrow for defects before shooting it. Defective arrows are not safe to shoot.

#### **General:**

- Warning labels placed on the bow are there to warn against unsafe operation. They should not be removed or obliterated.
- Buyer and user have the duty to obey all safety rules and laws covering the ownership and use of these archery products.
- For additional tuning information, refer to the Technical Bulletin included with your bow or go to [www.dartonarchery.com](http://www.dartonarchery.com) (tech info).
- For technical service, repair information, or replacement parts call Darton Technical Service Department at 989-728-9511.
- For Darton Apparel go to [www.dartonarchery.com](http://www.dartonarchery.com).

**VISIT [WWW.DARTONARCHERY.COM](http://WWW.DARTONARCHERY.COM) FOR ADDITIONAL INFORMATION AND LATEST UPDATES.**

## **FINE TUNING A BOW DUALSYNC COMPOUND BOW**

#### **Arrow Selection:**

The arrow selection charts provided by shaft manufacturers are the most reliable source of information when selecting the correct shaft for your own use. These selection charts are provided by each manufacture online and in their product catalogs.

#### **Arrow Velocity Ratings:**

Darton Performance bows achieve the fastest arrow velocities no matter what bow class you compare! Standard Rating Velocities published in Darton's fact sheets are based on IBO standard with bows being tested at 70 lbs. peak weight and a 30" draw length shooting a 350 grain arrow (5 grains per pound of peak weight).

Your local Darton Dealer can tune your bow to achieve peak performance. They can also determine your feet-per-second arrow velocity using a chronograph test. Your arrow velocities will vary depending on your bow's peak weight, draw length, tune and other factors. See the Darton Velocity Chart in the catalog listing year and model of bow. Darton youth bows are not manufactured to have 30" draw lengths and/or 70 lb. peak weights, therefore this information is not available. Darton recommends that all shooters keep Arrow Weights at or above the 5 grains per pound of peak weight for safe shooting.

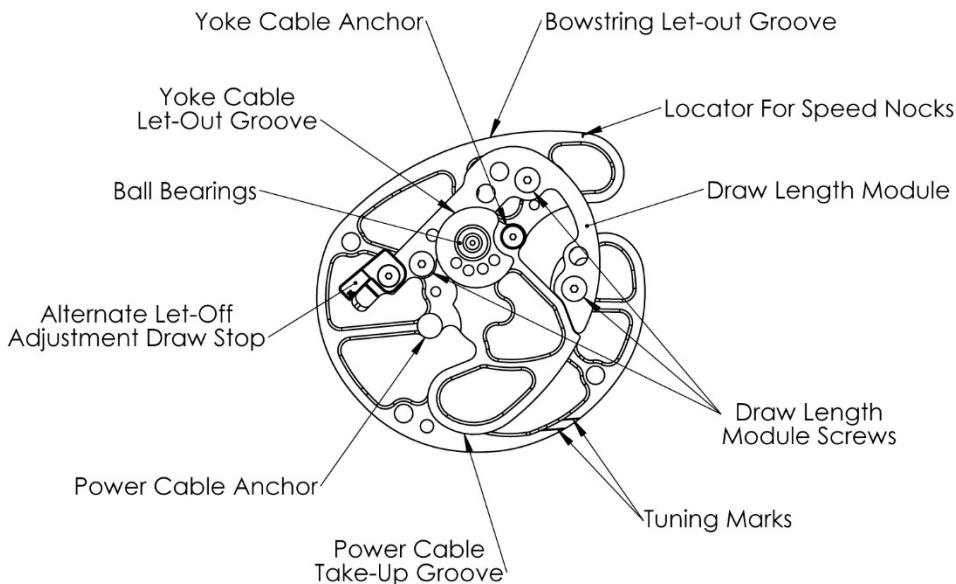
#### **Tiller Measurement:**

Tiller is a measurement of how much each limb is flexed. Darton precision matches all limbs during manufacturing to ensure even, precise limb tiller.

The Darton factory matches the limbs so that both the upper and lower limbs flex the same. If you increase or decrease your draw weight as described previously you should recheck to be sure both limbs are adjusted the same. To check limb adjustment, retighten each limb, then back out each limb bolt an equal number of turns.

## **Technical Bulletin:**

For more tuning and service information on a specific bow, refer to the Technical Bulletin included with each bow. This Bulletin can also be found at [dartonarchery.com](http://dartonarchery.com) (tech info).



### **Cam Tuning:**

One key to good performance is to optimize the energy stored through the draw cycle. This can be checked by inspecting the alignment of the power cables with the tuning marks located on the cams or modules. The power cables should be aligned between the tuning lines. If an adjustment is necessary, a bow press is required to remove tension from the cable. Once tension is removed from the cable the tune can be corrected by twisting the cables to lengthen or shorten them as required for correct alignment between the tune lines.

At the same time, it is best to check the axle to axle measurement and compare it with the measurement listed on the Technical Bulletin included with each bow. For advertised performance the axle to axle measurement should be within 1/16" of the listed specifications.

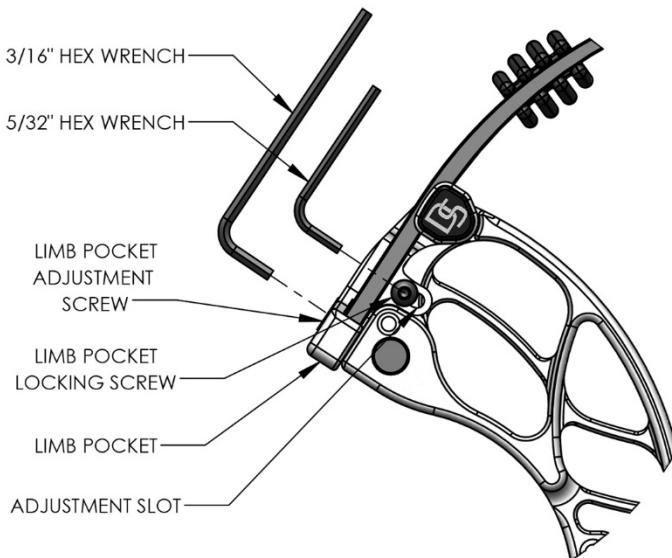
## **CHANGING YOUR STRING OR POWER CABLES**

Change your bowstring at the first sign of wear on all Darton bows. We recommend a Darton Dealer change your string or instruct you on the correct procedures listed below.

1. Use a bow press to relieve the tension from the strings and cables. Be sure to leave as much limb as possible to bend as you compress the bow. Don't bend the limbs any more than necessary to relieve the tension from the string and cables as damage to the limbs could occur and cause possible injury.
2. Always back the limbs out at least 4 turns from being tight before putting the bow in a press.

3. Remove the Bowstring and/or Cables that are to be replaced. Note where and how the cables are strung so the correct procedure is used during replacement. Make a special note as to how the cables are positioned in the cable slide.
4. Attach one end of the bowstring or cable to its anchor post.
5. Before attaching the other end of the bowstring or cable to its anchor post on the opposite cam check to see that they have similar twists.
6. Make sure the bowstring and cables fit correctly in their proper grooves.
7. Using the bow press slowly put tension back on the bowstring and cables.
8. After a couple of shots check the alignment of the power cables with the tune marks on the cams. Also, check the axle to axle measurement and compare it to the measurement listed in the Technical Bulletin. For best performance make the necessary adjustments in a bow press for correct tuning by twisting the bowstring or cables accordingly, clockwise (CW) to shorten, counter clockwise (CCW) to lengthen.

## **ADJUSTING THE BOW TO YOUR DRAW WEIGHT**



Your bow has been pre-set at approximately midway between the draw weights indicated on the limb. To adjust the draw weight to your shooting style requires simply loosening or tightening the limb bolts.

Darton Pro Series DualSync bows have pivoting limb pockets that rotate with the limb when the limb bolt is used to adjust the draw weight. The retaining screw located on one side of each limb pocket must be loosened prior to adjusting the limb bolt. Once the adjustment is completed, the limb pocket screws must be re-tightened before the bow is shot. To increase the draw weight, loosen the screws on the side of each limb pocket if applicable. Next, use the appropriate Allen Wrench and tighten the limb bolts in a clockwise direction. Each full turn is equivalent to approximately a three-pound (3 lb.) increase. It's essential that you adjust first one limb bolt, then the other with an equal number of turns to maintain limb balance. When the desired peak weight is reached, retighten limb pocket screws if applicable.

**WARNING:** Do not attempt to increase the draw weight beyond its indicated capabilities from the factory. A bow that is set over this weight can damage the limbs or riser, and will void the warranty.

To decrease the draw weight, turn the limb bolt counterclockwise. Do not exceed 5 full revolutions of the limb bolt from its fully tightened position for machined riser bows with pivoting limb pockets, 6 revolutions for all other bows unless noted differently in their respective Tech Bulletin.

## **LIMITED WARRANTY**

We at DARTON Archery are proud to stand behind the workmanship and overall quality of our bows by offering this Limited Lifetime Warranty.

This Warranty applies to the original owner and is nontransferable. The Warranty covers the riser against defects in material and workmanship for the lifetime of the bow, the limbs and cams against defect in material and workmanship for ten (10) years from the original date of purchase **based on Pro-Rated terms in conjunction with the Warranty language as described below.**

1. From the date of purchase through the third (3rd) year of ownership all warranty repairs, replacements, or substitutions will be made at no charge (subject to the terms of this policy).
2. For the period from the beginning of the fourth (4) year to the end of the fifth (5th) year from the date of purchase, all warranty repairs, replacements, or substitutions of Darton bow limbs and/or alloy cams will be made at a charge of 50% of the manufacturer's suggested retail price.
3. For the period from the beginning of the sixth (6) year to the end of the tenth (10th) year from the date of purchase, all repairs, replacements, or substitutions of Darton bow limbs and/or alloy cams will be made at a charge of 80% of the manufacturer's suggested retail price.

Darton's limited warranty is conditioned upon proof of date of purchase and the other conditions stated below. It is important that your sales receipt be filed in a safe place for future reference as warranty repairs will not be performed under warranty without a copy of the dated sales receipt. Without a copy of the sales receipt, the manufacturing date will be used to determine if the bow is still under warranty. If the serial number is removed from the bow, the warranty is void.

4. Darton warrants that our bows will perform their intended function if used in accordance with the instructions provided. This limited warranty during the first (3) years covers ONLY replacement parts, substitutions, labor, and return transportation costs to the consumer for the repaired bow, or replacement with a reconditioned bow or an equivalent new product at Darton's option. During the fourth (4<sup>th</sup>) year through fifth (5<sup>th</sup>) year, the consumer is responsible for 50% of the normal repair charges and all shipping charges. Beginning with the sixth (6<sup>th</sup>) year to the end of the tenth (10<sup>th</sup>) years from the date of purchase there will be a charge for all shipping, with repairs based on 80% of the manufacturer's suggested retail price/charge. After Ten (10) years, Darton will no longer accept any responsibility for the availability, repair, replacement, or substitution of any bow parts.

Strings, cables, arrow rests and component parts, cable guards and cable slides are expendable components of a bow and are subject to a variety of conditions that are beyond the control of Darton. Once the product has left our factory these parts may undergo a number of influences that can alter, impede or prohibit altogether the performance of these parts. Thus, Darton cannot and does not extend any warranty for these parts.

Transportation and insurance charges for the return of the bow to Darton are not covered. Damage caused by mishandling, abuse, improper stringing or modification of the product is not covered and will void the warranty. The use of arrows which weigh less than the minimum ATA recommended arrow weight (5 grains per pound of peak weight) will also void the warranty on all bows.

The terms of the Limited Warranty are a part of the sale between Darton and the original purchaser. DARTON MAKES NO OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, EITHER OF FITNESS OR OF MERCHANTABILITY, EXCEPT AS STATED ABOVE.

ANY SUCH ADDITIONAL WARRANTY IS EXPRESSLY DISCLAIMED TO THE EXTENT PERMITTED BY APPLICABLE LAW, DARTON SHALL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES OF ANY KIND OR SORT, WHETHER RELATING TO OR RESULTING FROM PERSONAL INJURY OR PROPERTY DAMAGE, OR OTHERWISE.

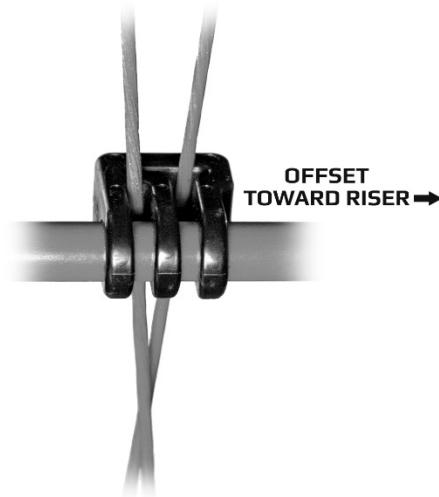
This limited warranty is valid only when repairs are performed by Darton or its Authorized Agents.

This limited warranty gives you specific legal rights. You may also have other rights which vary from state to state. Unless prohibited by applicable law, this limited warranty extends only to you, the original purchaser, and is not transferable.

To obtain service on any Darton bow call Darton Customer Service (989-727-9511) to obtain a Return Authorization Number. Send the bow, shipping prepaid and insured, to Darton Archery, Attn: Customer Service, 3540 Darton Rd., Hale, MI 48739. All accessory items must be removed from the bow prior to shipping. Darton will not be responsible for damage or loss of any accessory item left on the bow.

Items not covered by Warranty are strings, cables, cable guard slides, sleeve bushings, bearings and/or cosmetic appearance - scratches, chips, dings, etc. - caused through normal use and wear. There are no other warranties expressed or implied binding DARTON, its dealer or distributors.

### ACURA CABLE SLIDE



## **DARTON ARCHERY SERVICE & REPAIR FORM**

For repairs, complete and detach this Service & Repair Form and return it to Darton Archery along with your bow. Call us at (989) 728-9511 with any questions you may have. Please remove all accessories before shipping. Darton Archery will not be responsible for lost or damaged accessories.

Name: \_\_\_\_\_

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

City: \_\_\_\_\_

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

Day Phone: \_\_\_\_\_

Eve Phone: \_\_\_\_\_

Time to Call: \_\_\_\_\_

Bow Model: \_\_\_\_\_

Peak Weight: \_\_\_\_\_

Set Weight: \_\_\_\_\_

Purchased;

Place: \_\_\_\_\_ Mo/Yr: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Reason Bow is Being Returned for Repair:

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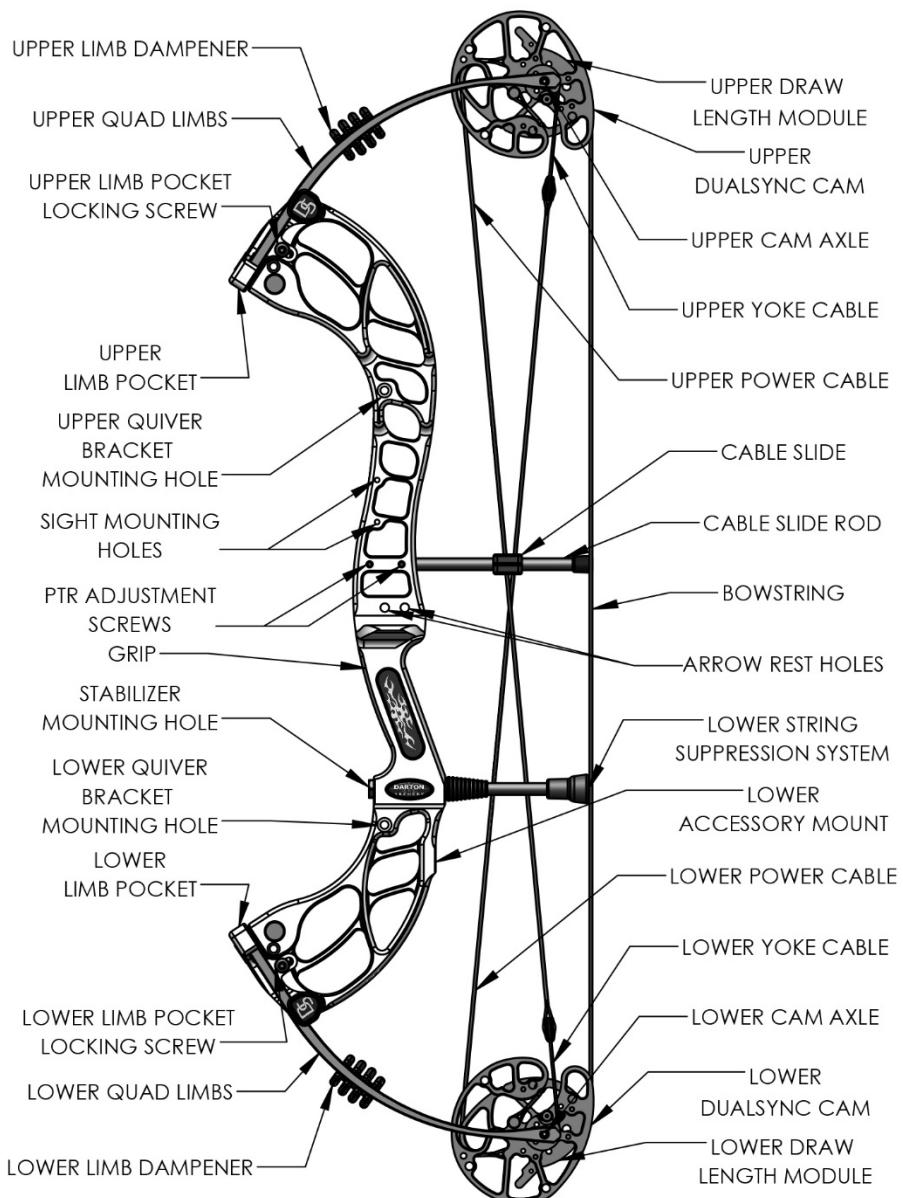
Return your Darton bow with this completed form to:

DARTON ARCHERY

3540 Darton Road, Hale, MI 48739

Attn: Repair Dept.

## DUALSYNC BOW COMPONENT DIAGRAM



## DUALSYNC EQUALIZER DIAGRAM

