



Merlin Bows
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OPERATING INSTRUCTIONS

Important!

This is an advanced piece of equipment designed for use by experienced archers. This operation sheet assumes you have experience of modern archery bows and their set up. Do not attempt to use or adjust you bow without proper instruction.

If you have any doubts on any aspect of shooting, bow set up, maintenance or operation please consult an authorized Merlin dealer for additional assistance.

Safety

This is a powerful bow and must be used responsibly. Make sure the area you are in is completely clear and that no one could accidentally walk within range of your bow. Be aware of arrow deflection should you miss as it could travel at extreme angles to the target.

Never dry fire your bow (Shoot without an arrow) This may damage your bow and cause injury to yourself. Do not use arrows lighter than 5 grains per pound of peak weight and inspect each arrow for damage before every shot. Make sure your arrows are long enough so that when the bow is drawn they can not be pulled off the rest and fall inside the bow. Inspect your bow regularly and cease shooting if any damage is found.

Maintenance.

Your bow requires minimal maintenance but does need care and attention to keep it in perfect order. The No.1 rule for any bow - Do not leave your bow in the car on a sunny day! Excessive heat will damage your bow. Do not store near any heat sources and do not store when wet. If shooting in the rain, dry your bow with a soft cloth before storing.

Inspect your strings and cables regularly and change at least once a year. If you find any loose or broken strands, replace immediately. Axles and bearings may need occasional lubrication. Use a light weight oil for this purpose.

Periodically check screws have not come loose. If screw heads start to become worn replace with new ones. Do not over tighten screws as you may strip the thread of the aluminium part. If you are having a problem with screws coming undone, use a temporary thread lock glue specially for this purpose. Do not use a permanent glue or you will not be able to remove the screws at a later date!

Bow Press Operation

Changing of strings and cables, or twisting of strings and cables requires the use of a bow press. I can not write in this short manual how to operate a bow press, but using the wrong type of bow press can damage your bow. We strongly recommend using a bow press that compress the bow from the limb tips. **DO NOT use the older style bow presses that use rollers.** If you have any doubt about using bow presses, or you have one and would like to check it with us first, please contact us.

Follow the bow press manufacturers instructions regarding operation.

We currently recommend the EZ Press by Last Chance Archery, (Pictured right) as the ideal style of bow press.



POUNDAGE ADJUSTMENT



Your bow peak weight can be adjusted approximately by 7 pounds by turning the limb weight adjustment bolt.

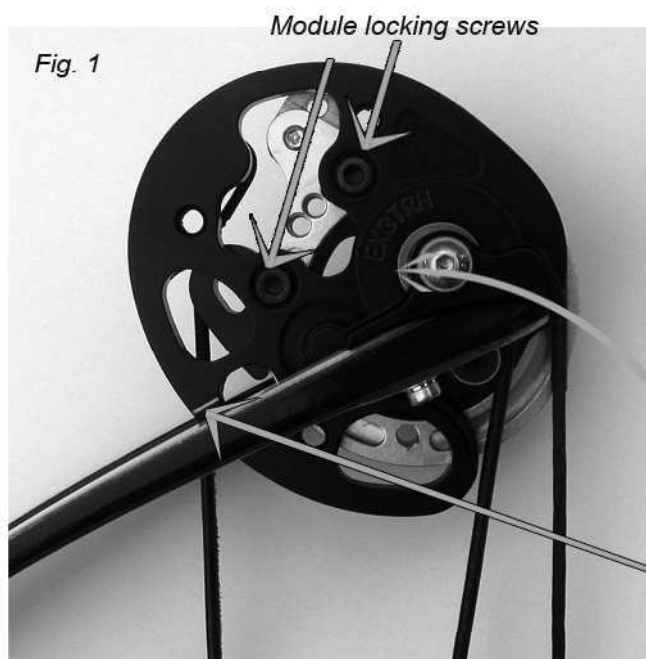
Before attempting to adjust this bolt, first loosen the limb pocket lock screws on both sides. (These screws are threaded in to each end of a stainless dowel. It may be necessary to use an allen key on both screws simultaneously if you find the screw is turning but not un-doing.)

The limb weight adjustment bolt can be turned a maximum of 5 full turns anti-clockwise from its fully wound up position. The fully wound up position can be found by turning the limb weight adjustment bolt clockwise until you feel the limb pocket bottom out on the riser. Do not over tighten, or damage to the underside of the limb pocket may occur.

Adjust each limb equally.

Retighten the limb pocket lock screws when set.

EXCALIBUR CAMS



EXCALIBUR CAM ADJUSTMENT Page 1 of 2

The Excalibur cam is a slaved twin cam system. Although this system is less sensitive to discrepancies in cam synchronization than standard twin cams, some care should be taken in the setting up of these cams to obtain best results. The following notes should assist you in their set up.

Cam sizes: There are 4 cam sizes. There is a specific top/bottom and left/right handed version of each size. These can be identified by the serial number engraved on each cam.

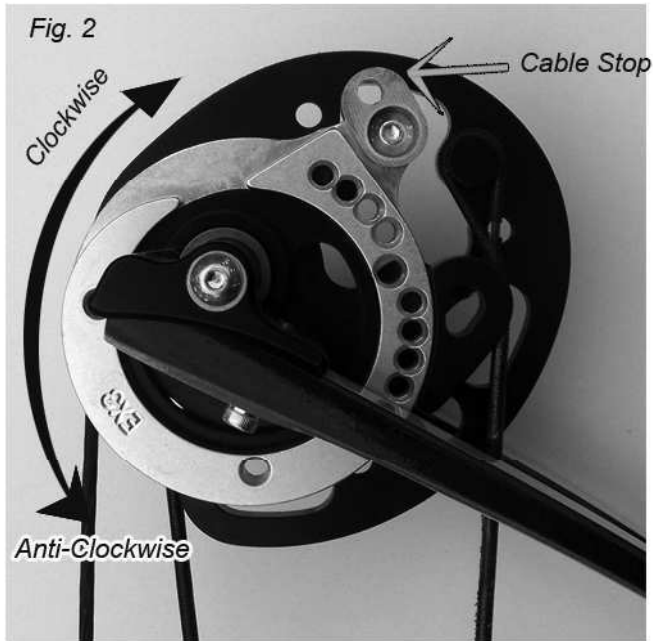


E.g. The cam pictured has engraved 'EX3TRH'

EX=Excalibur Cam, 3=Cam Size, T=Top Cam, RH=Right Handed.

CAM ROTATION: Each cam has several engraved lines that are viewed in relation to the top face of the limb. These lines are to aid in the reference of cam rotation. The cam in the picture shows the cam rotated towards its longest setting. Shortening the bow string would shorten the draw length showing more lines visible. When the lowest line is visible, you are towards the shorter side of the rotation.

These lines should be equally visible on the top and bottom cam. This is the first stage of setting cam synchronization. If there is a discrepancy between the top and bottom cam then the cables need to be twisted to adjust this. (Speak to a Merlin Dealer for assistance if you do not know how to do this)



DRAW LENGTH ADJUSTMENT: Other than changing the length of the bow string to change the draw length, adjustments can be made by rotating the draw length module. First of all, remove the module locking screws as shown in Fig.1. This will free up the module and allow it to turn. Look at Fig 2. Rotating the module clockwise will increase the draw length. Anti-clockwise will decrease the draw length. Rotate the module until the module locking screw holes line up again and replace screws.

Repeat for the bottom cam.

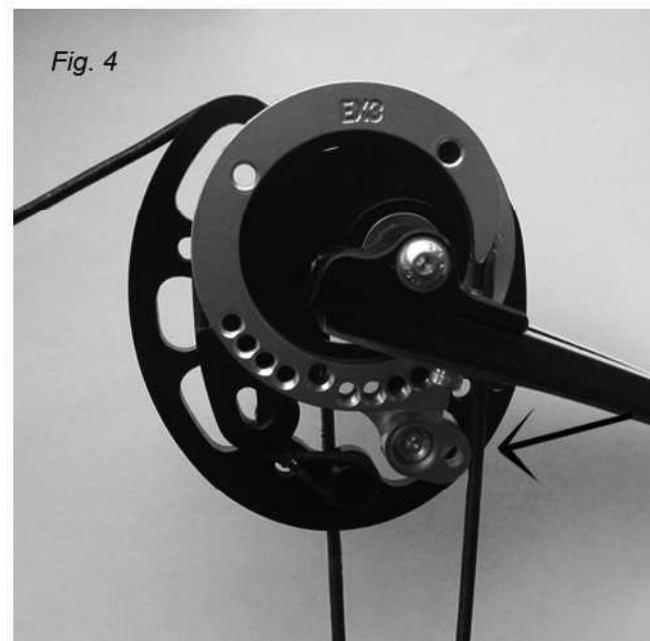
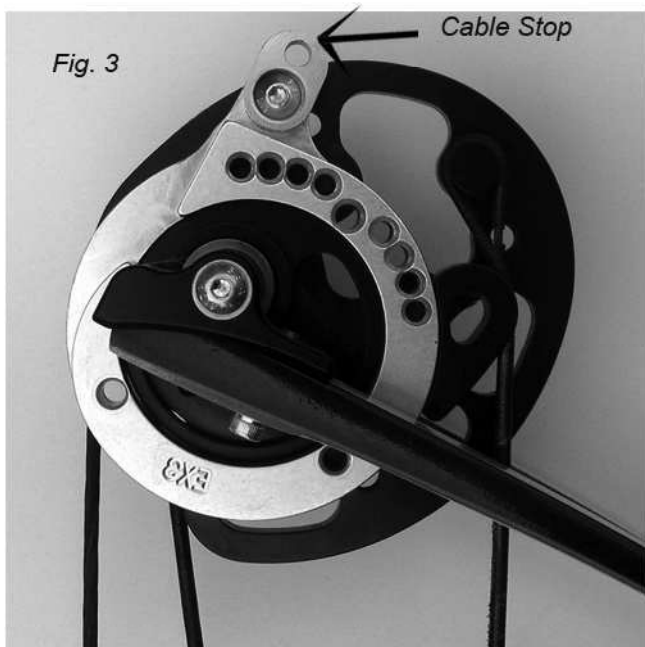
NEW FEATURE: Adjustable Cable Stop. When using a rotating module to change draw length there is always a difference in feel and let off between the longest and shortest draw settings. The adjustable cable stop overcomes this. Fig. 2 shows the cam with the draw length module set in the longest draw setting. When the cam is in this position the cable stop should be rotated forwards as shown in the picture.

When the draw length module is set in its shortest setting, the cable stop should be vertical, as shown in Fig. 3. Compare the two images to see the difference in the angles.

Both the top and bottom cam should be rotated the same amount so the top is a mirror image of the bottom.

IMPORTANT!

Do not draw the bow without the cable stop fitted. Also, be careful not to over tighten the cable stop screw or the thread will be stripped on the module.



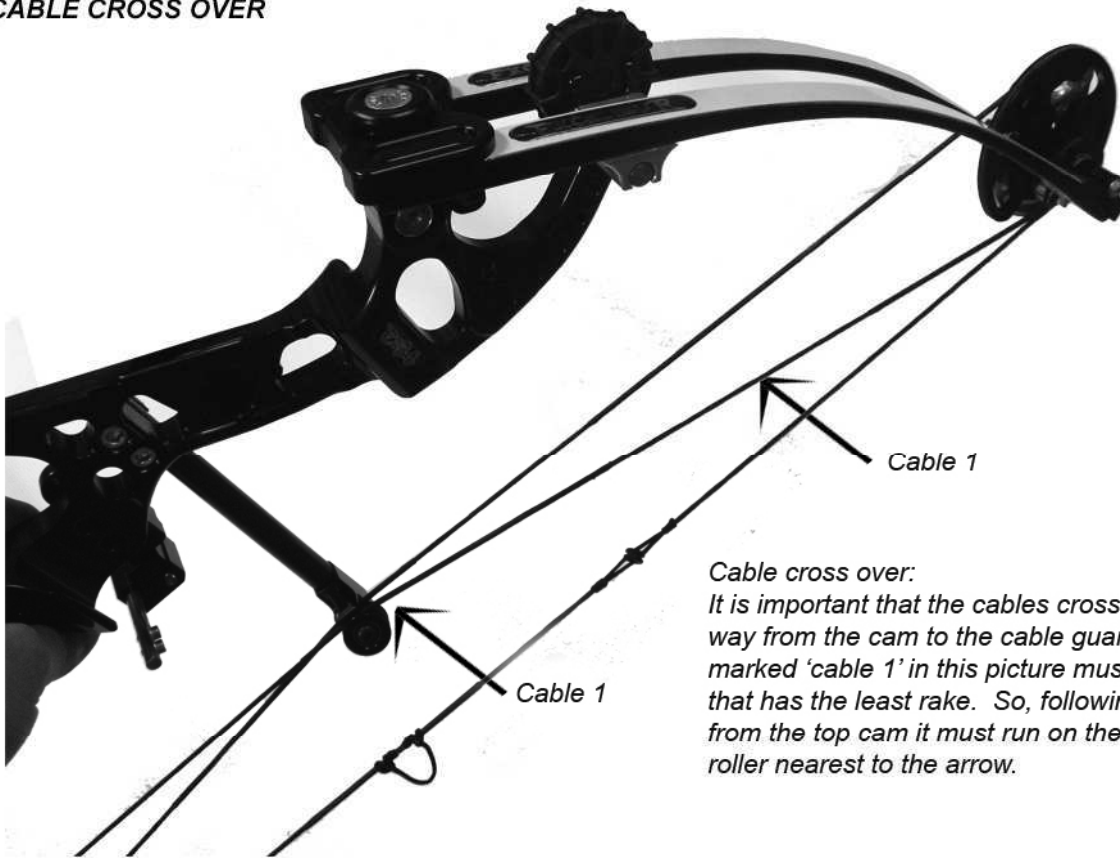
FINAL CHECK

There is a second stage of synchronization. This is to make sure that both cams reach full draw at the same time. This determined by making sure the top and bottom cable stop hits the cable at the same time at full draw.

Ask someone to visually assist while you draw the bow.

If there is a discrepancy, some twisting of the cables will be necessary. (Speak to a Merlin Dealer for assistance if you do not know how to do this)

CABLE CROSS OVER



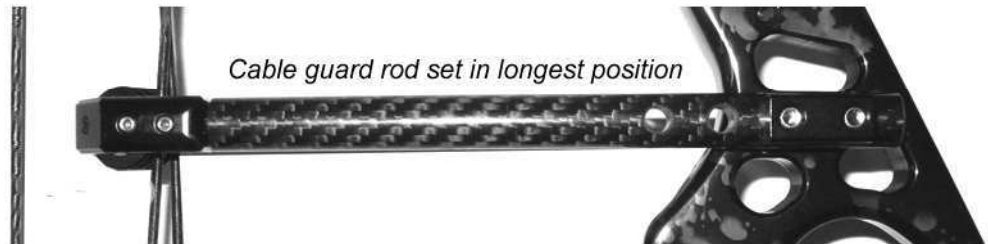
Cable cross over:

It is important that the cables cross over the right way from the cam to the cable guard. The cable marked 'cable 1' in this picture must be the cable that has the least rake. So, following this cable from the top cam it must run on the cable guard roller nearest to the arrow.

CABLE GUARD

You will notice that there are multiple holes where the cable guard is mounted on to the bow.

The position of the holes change the poundage of the bow and the force draw curve.

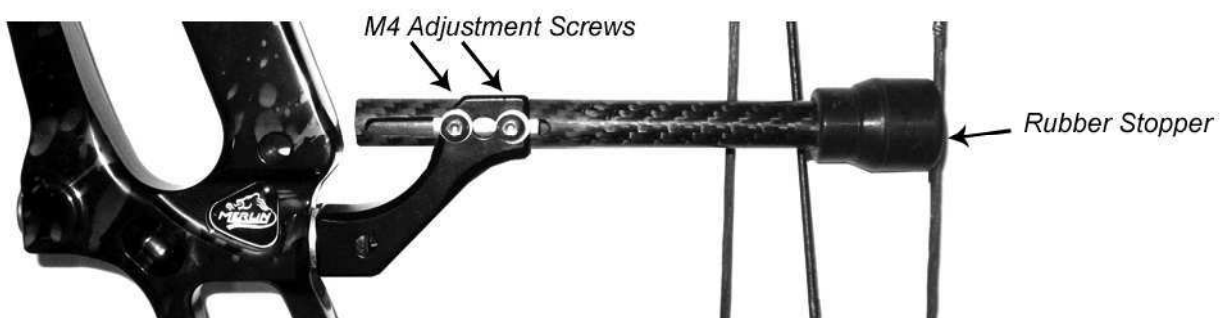


When the cable guard is set in its longest position (pictured above) the poundage will decrease and the draw cycle will be slightly softer. When in the shortest position, the poundage will increase and the draw cycle will be harder. Using this in conjunction with limb weight adjustment bolt (see page 2) gives a wide range of weight adjustment options.

STRING SUPPRESSOR

The string suppressor (pictured below) reduces string oscillation and lowers vibration. The length of the suppressor should be set so it just lightly touches the string. The rubber stopper should not deform the string by pushing it back. It should also be aligned centrally with the string when viewed from behind. The length of the suppressor can be adjusted by loosening the M4 screws and sliding the rod to the desired length. Regular waxing of the string in the contact area may be needed. Alternatively, the string can be served around the contact area to decrease wear.

(Note: The rubber stopper is glued on to the rod. If the stopper is removed, it needs to be re-glued or it may pop off when shot)



Warranty

Your Merlin 'Excalibur' compound bow is backed by a 'Limited Lifetime Warranty' as set out below.

For the first 3 years of life, each Excalibur bow is guaranteed to be free from defects in material or workmanship. During those 3 years, Merlin Bows will offer repairs or replacement at the cost of Merlin Bows. For the remainder of the lifetime of the product, Merlin will offer repairs or replacements at a 50% discount from the recommended retail price, subject to availability of suitable compatible parts.

It is very important that you retain a copy of the original, dated sales receipt. You must also register your bow with us within 30 days of purchase. This can be done either by returning the warranty registration slip provided with your bow, or by registering online. Failure to register your bow and failure to provide proof of purchase may result in Merlin Bows refusing to perform warranty work.

Service Procedure.

If your bow requires warranty work you must first contact Merlin Bows for a Return Authorization Number. After receiving an RA number, Merlin will discuss with you the best location to send your bow for repair. For example, UK and European customers may be required to send the bow direct to Merlin Bows for repair. Our USA customers may be required to send the bow to our US based service centre. Warranty work can also be carried out by an authorized Merlin dealer. However, Merlin Bows will not cover additional labour costs if any may be charged by that dealer. It is the responsibility of the owner to arrange safe transport of the bow to the place of service. The cost of returning a bow to the place of service is not covered under the warranty. Merlin Bows will then pay the return shipping costs back to the customer. If you request a priority or express shipping service, the additional cost of this is payable by you.

When shipping the bow to the place of service, the RA number should be clearly marked on the outside of the parcel. All accessories should be removed from the bow prior to shipping.

Additional Warranty Limitations.

- Stripped threads, rounded off or broken screw heads are not covered under warranty.
- Cosmetic finish, including, but not limited to:- Chips, scratches, dents and surface finish are not covered under warranty.
- Wearable parts, such as strings and cables, axles, bearings, grips, threads and cable guards are not covered under warranty.
- Signs of misuse, modification or negligence in both maintenance and operation will render the warranty invalid.
- Shooting arrows weighing less than 5 grains per pound of draw weight will render the warranty invalid.
- This warranty applies only to the first purchaser of the bow and is not transferable.
- Merlin Bows reserves the right to replace any defective parts with a newer designed alternative.
- Damage caused by improper use of a bow press is not covered.



WARRANTY REGISTRATION SLIP

YOUR DETAILS

NAME	
ADDRESS 1	
ADDRESS 2	
TOWN	
COUNTY/STATE	
POSTCODE/ZIP	
COUNTRY	

BOW DETAILS

BOW MODEL	
SERIAL NUMBER	

SALES DETAILS

DEALER NAME	
PURCHASE DATE	

Return To:
Merlin Bows
Bull In The Hollow Farm
Loughborough Road
Loughborough
Leicestershire
LE12 8UE, England

or email the same information to:
info@merlin-bows.co.uk