# Operations Manual

*Usage, care and maintenance of all Horton crossbows*

HORTON
Horton Manufacturing Company Inc.

# INTRODUCTION

CONGRATULATIONS! You are now the owner of one of the finest crossbows ever designed. Your new Horton crossbow is one of the most accurate and dependable production crossbows known to the shooting industry. All Horton crossbows are manufactured as high quality, precision sporting arms which utilize the latest materials and manufacturing processes to ensure their dependability and safety. With reasonable care, your new Horton crossbow will provide you with a lifetime of pleasure and dependable service whether you are a hunter, an outdoorsman, or a recreational target shooter.

Before you begin assembly or shooting, read this manual thoroughly. Without proper working knowledge and instruction, you could damage your crossbow or cause injury to yourself and/or others. When you have read this manual thoroughly and understand it completely, be sure to save it for future reference.

**NOTE: If any part of this manual is unclear, or poses any doubt, contact Horton Customer Service or your local Horton dealer. They are both experienced in the assembly and operation of your crossbow and would be glad to assist you with any problems that may arise.**

Every effort has been made to ensure that all product photographs and descriptions in this manual are accurate. However, with our continual effort to provide you the best products, changes in materials or design may result in production changes before a new manual can be updated. Horton Manufacturing Company, Inc. reserves the right to modify or change product specifications and the information contained in this manual without notice.

Horton Manufacturing Company, Inc. shall not be liable for technical or editorial omissions or mistakes in the manual nor shall it be liable for incidental or consequential damage resulting from your use of the information contained in this manual.

# Safety Precautions

1. **Always remember to treat your crossbow with the same respect due any sporting arm:** Your crossbow is a very powerful weapon and can be dangerous and deadly if mishandled.
2. **Always point your crossbow in a safe direction:** Never, under any circumstances, point your crossbow at anything you do not intend to shoot!
3. **Always check your crossbow thoroughly for worn, damaged, loose or missing parts prior to shooting:** This will help you avoid malfunctions and prevent possible injuries.
4. **Never dry fire your crossbow:** Shooting your crossbow without an arrow not only voids the warranty, but it could also damage the crossbow and possibly cause bodily injuries.
5. **Never cock or load your crossbow until you are ready to shoot and are sure of your target:** While hunting, keep in mind that many hunters dress in camouflage clothing and are difficult to identify.
6. **Never release the safety until you are ready to fire:** Do not attempt to delete or alter the safety or trigger mechanism in any way. This will not only void the warranty, but could also result in severe bodily injury and possible death.
7. **Before shooting, be sure the crossbow limbs are clear from striking tree limbs and other obstacles:** Should this occur, accuracy of the arrow would be greatly affected and could result in damage to the crossbow and/or injury to the shooter and others.
8. **Never, under any circumstances, shoot your crossbow while behind or directly along side others:** If the crossbow was to malfunction, injuries may result to those who are standing directly along side the crossbow.
9. **Never, under any circumstances, shoot any projectile in your Horton crossbow except for arrows recommended by Horton for your specific crossbow:** Because of the crossbow's ability to store a tremendous amount of energy, any deviation in the recommended arrow could damage the crossbow and possibly result in bodily injury.
10. **Never load the crossbow with an arrow until you're ready to fire:** When hunting from a treestand, always wear a safety belt and use a rope to hoist your UNLOADED crossbow in and out of the stand. When stalking or walking, NEVER load an arrow into the crossbow until ready to fire.

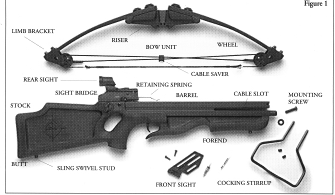
**REMEMBER TO CONSULT YOUR LOCAL GAME DEPARTMENT ON RULES AND REGULATIONS GOVERNING CROSSBOW HUNTING AND THE TAKING OF LEGAL GAME SPECIES.**

# INSTRUCTIONS ON ASSEMBLY

Before taking to the field in pursuit of big game or heading out to the target range, some basic assembly is required. A set of hex keys have been supplied to aid you in the assembly process. We also suggest a flat spacious work area where you can spread out and devote your full attention. First check to make sure that you have received everything. Remove the stock, bow unit and hardware packet from the carton. Visually, inspect all parts and check to ensure that the contents of the packet are complete. **See Figure 1.**

**NOTE: Because this manual services numerous crossbow models in the Horton line, variation may exist between your crossbow model and those photographed throughout. All assembly photographs have been generalized so that they relate to all Horton crossbow models.**

Figure 1




Included in the crossbow pack are the following items:

1. Stock with rear sight
2. Bow unit
3. Cocking stirrup
4. Two 10 x 24 x 3/8 set screws
5. Front sight with sight pin
7. 5/16 x 18 x 1-1/2 mounting screw
8. Miscellaneous screws and hardware
9. 1 cc tube of rail lubricant

If for some reason all the components have not been supplied, please notify us immediately at (330)633-0305 so we can provide you with any missing items.

# INSTRUCTIONS ON ASSEMBLY

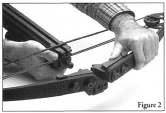


Figure 2

Now that the contents of the crossbow pack have been checked and all your items have been supplied, let's begin the assembly operation.

1. Holding the bow unit in one hand and the stock in the other, align and position the bow string so that it rests on top of the barrel. **See Figure 2.**
2. On compound crossbows, it will now be necessary to insert the cables into the cable slot that has been provided either in the barrel or stock. **Some compound crossbows will be pre-equipped with a cable saver on the cables in which case the cable saver must be positioned with the concave side up so that it will mate and align with the corresponding shape on the underside of the flight groove.**

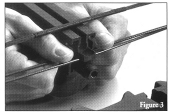


Figure 3

***A CABLE SAVER IS REQUIRED FOR ALL ALUMINUM BARREL CROSSBOW STOCKS.**

**NOTE:** It may be necessary to apply a small amount of downward pressure to the cable in order to get them aligned with the cable slot. **See Figure 3.**

3. Move the bow unit towards the front of the stock while allowing the string and cables (if applicable) to slide towards the trigger. The cables on compound crossbows should be in the cable slot and the string should be resting on the top of the barrel.

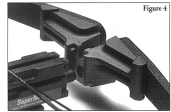


Figure 4

4. As the bow unit approaches the front of the barrel, make sure the location rod in the front of the stock aligns with the hole in the rear of the riser. **See Figure 4.**

# Instructions on Assembly

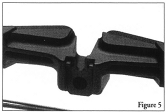


Figure 5

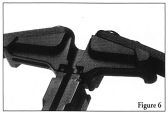


Figure 6

Figure 7

Upon close inspection of the barrel mounting recess in the riser, you will note two (2) location tabs. It is very crucial that these location tabs mate with the corresponding slots that have been provided in the barrel/stock. **See Figure 5.**

5. To ensure a proper fit, it may be necessary to apply either a small amount of downward pressure or lift the barrel slightly to ensure that the riser location tabs will properly align with the slots in the barrel/stock. **See Figure 6.**
6. Continue to slide the bow unit toward the trigger until the locating rod and barrel recess in the riser seat fully onto the front of the stock.
7. After the bow unit has been correctly aligned to the stock, secure both parts together using the front barrel screw and washer provided. Insert the bolt through the washer and into the hole in the front of the riser. Tighten securely with a 3/16" hex key.
   **Do not over-tighten. See Figure 7.**
8. Next, attach the foot stirrup. Place the foot stirrup into the hexagon holes provided in the front of the riser. Make sure the foot stirrup is mounted in such a manner that it does not interfere with the arrow flight groove. The loop in the front of the stirrup should be positioned down or away from the flight groove as shown. **See Figure 8.**

# Instructions on Assembly

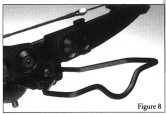


Figure 8

Figure 9

9. Slide the stirrup all the way back into the riser until it stops. Check to make sure the flat hexagonal sections on the stirrup mate to the flat hexagonal sections in the riser.

10. Lock the foot stirrup in place by installing the two 1/4"-20 x 3/8" set screws provided into the corresponding holes on the bottom side of the riser. Tighten both screws with a 1/8" hex key. Tighten securely. Check to make sure the foot stirrup is secured before attempting to cock the bow. **See Figure 9.**

# Sight Installation

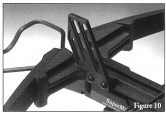


Figure 10

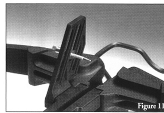


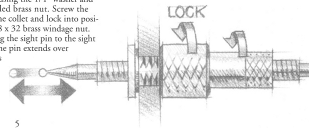
Figure 11

Your new crossbow has been packaged with one of the exclusive Horton sighting systems depending on the specific model you purchased.

**Mounting the Blade/Pin Sight**

1. First, attach the front sight blade to the barrel with the two screws included. On crossbows with aluminum barrels you will need to use the two machine screws included and on polymer barrels, two self-tapping phillips screws.
2. The sight blade mounts on the left side of the barrel, directly behind the bow unit in the two holes provided. Position the bracket so that it slopes toward the front of the bow unit as shown. **See Figure 10.**
3. Next, attach the sight pin assembly to the sight blade. Completely disassemble the sight pin assembly. Mount the sight pin unit to the front sight blade by placing the elevation collet through one of the slots in the sight blade as shown. Lock the collet to the sight blade using the 1/4" washer and 1/4" x 20 knurled brass nut. Screw the sight pin into the collet and lock into position with the #8 x 32 brass windage nut. When mounting the sight pin to the sight blade, be sure the pin extends over the barrel and is positioned above the flight groove. **See Figure 11.**

Your crossbow is now fully assembled and ready to shoot. Visually inspect the crossbow and check all screws for tightness and proper installation. Visual inspection should be standard procedure prior to every outing. Horton recommends that you apply a thin film of Rail Lubricant, which has been supplied, to the top of the barrel prior to shooting to prolong string life and reduce friction. Rail Lubricant has been tested to significantly increase the life of the center serving. Reapply Rail Lubricant approximately every twenty-five (25) shots.



# LOADING AND SHOOTING

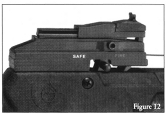


Figure 12

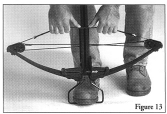


Figure 13


Figure 14

**This step should not be conducted unless you are in a safe and spacious area and in a position to safely shoot. Be sure to always identify your target prior to shooting.**

1. Prior to cocking, place the safety (located below the rear sight mount) in the **"Off"** or **"Fire"** position. Pull the trigger to ensure it is ready to accept the string. If you cannot pull the trigger, the safety is engaged and must be put into the **"Fire"** position. **See Figure 12.**
2. Place your foot securely through the foot stirrup. Reach over the top of the stock and grasp the string in each hand next to both sides of the barrel. Learn to use your thumbs as guides along the sides of the barrel to automatically center the string during loading. Centering the string gives you consistent left to right accuracy. **See Figure 13.**
3. With the safety in the **"Fire"** or **"Off"** position and your arms locked, pull the string back to the rear of the sight bridge by standing straight up. After the string is drawn, relax your hand tension slightly to ensure the string has been captured by the latch. Do not let the string go completely. If the string is not held securely, pull back again. The string is now latched into the trigger housing. **See Figure 14.**

**NOTE: The crossbow will not cock if in the "Safe" or "On" position.**

4. The safety lever is automatically engaged when the string is properly cocked. However, always check to make sure the safety is in the **"On"** or **"Safe"** position before loading. Never assume the safety is **"On"**.
5. Place the recommended arrow for your model crossbow in the flight groove with one of the fletchings facing down in the groove. Slide the arrow towards the trigger assembly and under the arrow retaining spring until the end cap of the arrow touches the string. **See Figure 15.**

**THE CROSSBOW IS NOW LOADED. HANDLE WITH CAUTION.**

6. While pointed safely downrange: Shoulder your crossbow, placing your front hand on the forearm in a comfortable manner that positions your fingers **below** the flight groove, – clear of the strings' path as it travels down the barrel upon firing. Now, remove the safety by moving the safety lever forward into the **"Fire"** position. Your crossbow is ready to shoot. Take aim and squeeze the trigger to fire the crossbow.

Figure 15

**CAUTION: BE SURE TO POSITION YOUR FINGERS BELOW THE STRING AND CABLE PATH TO ELIMINATE PERSONAL INJURY.**

## UNLOADING AND UNCOCKING

Horton recommends that the safest way for one person to uncock his crossbow, is to discharge an arrow into a properly constructed crossbow target at close range, or if afield, discharge the arrow into the ground. Be careful when firing into the ground that the area is free from rocks and other debris that may damage the arrow or cause it to ricochet. You may wish to consider always carrying an old or slightly worn arrow with a field point on it when unloading the crossbow in this manner to eliminate possible damage of your better arrows.

**REMEMBER: NEVER DRYFIRE YOUR CROSSBOW. SHOOTING WITHOUT AN ARROW WILL DAMAGE THE CROSSBOW AND MAY RESULT IN BODILY INJURY.**

# SIGHTING THE CROSSBOW

The following information will instruct you on how to sight-in your crossbow using the original equipment sights.

The information regarding usage of the original equipment sights is very useful and important. Horton recommends that both telescoped and nontelescoped shooters thoroughly understand this sight adjustment system.

Your crossbow has the following sight adjustments to aid in pinpointing your range and accuracy.

**Standard Pin Sight Adjustments**

**Moving the sight pin up** will cause the impact point of the arrow to move down.

**Moving the sight pin down** will cause the impact point of the arrow to move up.

**Moving the sight pin left** will cause the impact point of the arrow to move to the right.

**Moving the sight pin right** will cause the impact point of the arrow to move to the left.

**Moving the pin 1/4 of an inch** will change the point of impact 9 inches at 20 yards.

Remember, the lower the front sight pin, the higher the arrow will impact, enabling you to shoot longer distances. Be careful though that the sight pin has not been lowered too far down resulting in it "tagging" or contacting the fletching of the arrow when fired.

1. When sighting, Horton recommends that you take your first shots at close range (approximately 10 yards). For best results when sighting, we recommend that you use a bench rest.

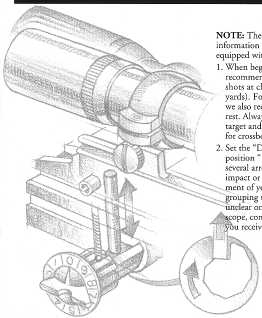
Always make sure you have a suitable target with a backstop, one made especially for crossbows. Horton Manufacturing offers an outstanding target designed for maximum arrow stopping capabilities as well as easy arrow removal. For further details on acceptable targets, consult your local dealer.

2. After your crossbow has been loaded, shouldered and pointed down range toward the target, shoot several arrows to determine the point of impact or "group". You are now ready to make sight adjustments so that the rear sight and front sight will be in line with your desired point of impact. Refer to the information previously noted on sight adjustments and make any necessary changes.

3. Once you are satisfied with the point of impact in relation to where your sights are set, move back to a distance of twenty (20) yards. Shoot several arrows again to determine your "group" and make any necessary changes to set your sights for this new distance. You should note that when moving back from 10 to 20 yards the new impact point of the arrows will be approximately 4 inches lower than at 10 yards. You may reset your sight pin to this new distance or you may add additional sight pins.

When using the original equipment sights, additional front sighting elements may be used to represent different yardages. Check with your local Horton dealer for additional sight pins. Two or three are typically optimum and should be set at different ranges such as 20 yards, 30 yards and 40 yards. This will eliminate most of the need for "hold-over" and "hold-under" when you go afield and are forced to shoot at different unknown distances.

# DIAL-A-RANGE



**NOTE:** The following "Dial-A-Range" information is based on using a crossbow equipped with a 4x scope.

1. When beginning to sight in, Horton recommends that you take your first few shots at close range (approximately 10 yards). For best results when sighting, we also recommend that you use a bench rest. Always make sure you have a suitable target and backstop, one made especially for crossbows.
2. Set the "Dial-A-Range" adjustment to position "1" on your calibrated dial. Shoot several arrows to determine the point of impact or "group". Use the internal adjustment of your scope to adjust the arrow grouping to the point of aim. If you are unclear on how to correctly adjust your scope, consult the instruction manual that you received with your scope.
3. Once you are satisfied with the point of impact in relation to where your sights are set, move back to 20 yards and increase the "Dial-A-Range" setting to position "2". Shoot several arrows again to determine your "group" and make any necessary adjustment to zero your scope to this new distance.

**If you wish to obtain maximum utilization and accuracy of your "Dial-A-Range", you should experiment with your crossbow and equipment to determine the exact yardage for which each "Dial-A-Range" setting is calibrated and zeroed against the arrows point of impact. Because of the numerous variations that potentially exist between broadhead weight, design, arrow fletchings, bow models and scope magnifications, we can supply you with only estimated impact points in relation to your "Dial-A-Range" settings. On average an increase of one position on the dial will be approximately seven (7) yards.**

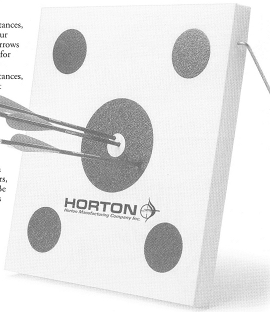
# Selecting the Proper Arrow

Horton Manufacturing has conducted extensive research and performed hundreds of hours of both bench and field testing to develop the most accurate and dependable crossbow arrows available.

It is crucial that you always select the appropriate arrow for your crossbow because your crossbow stores a tremendous amount of energy. Any deviation from the recommended Horton arrow will void your warranty. Arrow deviation may also damage the crossbow and result in injuries to the shooter and/or others. For these reasons, always use the recommended Horton arrow that has been appropriately designed to function in your specific Horton crossbow. Arrow selection tables are included on all Horton arrow packaging.

**Arrow Safety**

1. Never, under any circumstances, shoot any projectiles in your Horton crossbow except arrows recommended by Horton for your specific model.
2. Never, under any circumstances, shoot if a crack is apparent on the arrow.
3. Never, under any circumstances, shoot your crossbow without an arrow.
4. Never carry hunting broadheads in such a way that the sharp edges pose a threat to the shooter, others, or your crossbow string. Be sure broadheads are always completely covered.



# Care, Maintenance and Accessories

Your Horton crossbow is a quality, precision sporting weapon; and as such, it requires occasional maintenance to ensure continual top performance. Again, prior to every outing, it is recommended that an overall check of any cables, wheels, strings, arrows and screws be conducted.

1. Always maintain your crossbow string and cables. If applicable, string and cable changes should be made each season or as needed. Horton crossbow string wax should be used frequently on your string to prolong its life. In the event your string has frayed, shows signs of excessive wear or strands have broken, replace the string immediately.

**NEVER USE STRING WAX ON THE CENTER SERVING.**

2. To ensure safe and continual top performance, your crossbow will require minimal lubrication. To reduce friction and increase arrow speed, we suggest the use of our "Rail Lubricant". Rail Lubricant is used on the barrel to reduce serving string wear and lower the coefficient of sliding friction created from the string and arrow riding on the barrel. Occasionally, you should apply a drop of high quality oil to such areas as the wheels on compound crossbows as well as axles and trigger mechanism, preferably a teflon or silicone based lubricant. As with all quality sporting weapons, we also suggest that a light coat of lubricant be applied to all metal parts and surfaces to stop rusting and oxidation.
3. Keep your crossbow clean and store it in a cool, dry area, free of dust and debris. A quality Horton padded case works well and is suggested for proper storage. When storing your crossbow for prolonged periods, it is not necessary to unstring the bow unit.
4. Replace any component that shows signs of excessive wear especially strings and cables.
5. Never leave your crossbow exposed to extreme heat, such as in an enclosed automobile trunk on a hot day.

**NEVER ATTEMPT TO TRANSPORT YOUR CROSSBOW IN THE COCKED POSITION.**

Horton manufactures a complete line of high quality crossbow accessories that have been designed exclusively to interact with your Horton crossbow. This accessory line includes such items as quivers, carrying cases, aiming devices and numerous maintenance items to prolong the life and beauty of your crossbow. See the complete line of quality crossbows and accessories at your local Horton dealer or write to:

**Horton Manufacturing Company, Inc.**
**484 Tacoma Avenue**
**Tallmadge, Ohio 44278**
**(330)633-0305**

# LIMITED LIFETIME OPERATIONAL WARRANTY

Horton Manufacturing Company, Inc. warrants its crossbows against defects arising from faulty workmanship or materials for the lifetime of the original purchaser.

All crossbow strings, cables and wheels are excluded from this warranty, as is normal wear and tear. All Horton crossbow limbs are covered only for a three year period. Any attempt to alter, dismantle or change the standard specifications of the crossbow, other than as specified in the instruction booklet, will make this warranty null and void.

This warranty is made to the original owner of the crossbow and is not transferable. Warranty obligation is limited to the repair or replacement of any part or parts returned to Horton Manufacturing Company, Inc., and which are determined by the manufacturer to adversely affect the satisfactory operation of the crossbow. Horton Manufacturing Company, Inc. reserves the right to request proof of purchase and purchase date in regards to items that are only warranted for a specific period of time as described within this warranty. To guarantee warranty service, the enclosed warranty form must be completed and returned within ten (10) days of purchase to establish all warranty rights between you, the original purchaser, and Horton Manufacturing Company, Inc. We assume no liability for any incidental or consequential damages or incidental expenses. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you. No warranties are made or are authorized to be made other than those expressly contained herein.

This warranty gives you specific legal rights and you may also have other rights which vary state to state. The above warranty covers crossbows sold in the United States only.

To make a claim under this warranty, please contact the customer Service Department of Horton Manufacturing at (330)633-0305 to obtain a return authorization number (RA number). After receiving your RA number, please mark the number on the outside of the package, enclose the defective item with a brief explanation of the problem and ship via U.P.S. Please be sure to include your address and phone number also. Failure to obtain an RA number may result in either refusal, or place the item on hold pending contact to determine the reason for the return. All returns are to be shipped prepaid direct to:

HORTON
Horton Manufacturing Company Inc.



**Horton Manufacturing Company, Inc. 484 Tacoma Avenue Tallmadge, Ohio 44278 (330)633-0305**