

# PREDATOR IV™ INSTRUCTIONS

US Patent # 5,388,336

**Don't let this long instruction sheet scare you. The PREDATOR IV™ system is the most advanced and versatile pendulum system designed. Setting up and sighting-in is totally different than any other sight. Follow these instruction carefully and take your time and it will give you unparalleled performance you are seeking. If you still need questions answered, please call toll free 1-877-607-0381**

**If you are using a peep sight, while aiming, do not maintain the pin in the middle of your peep window like normal. You must match the circular portion of the glow guard on the inside edge of the hole through the peep window. Let the pin float up and down as you are aiming at various ranges and place on target. This action is more accurate than trying to maintain the pin in the middle of the peep. It will soon become instinctive for your eye and body to maintain this alignment while on aim to the target. This new way will guarantee that you will shoot more accurate, with tighter arrow groups than ever before. The edge of the guard glows-in-the-dark, thereby outlining the inside profile of the peep hole in low light. Normally you can't see the edge of the peep hole at certain low light conditions. This new way will give you longer hunting time and confidence to shoot with superior accuracy in very low light!**

**The Predator IV simply will not sight-in if you ignore the above information.**

**Until now, there has not been a peep sight made that will give a round hole to your eye on all bows and draw lengths! Because different string angles present a circular hole at different angles to your eye. Therefore the hole becomes oval shaped. Not good for consistent accuracy! Predator Products Company is now marketing it's own peep sight - The Perfect Circle Peep. Most peep sights are made for bow lengths of 44" to 38"(ATA). The Perfect Circle has 1/4 inch, specially designed hole that not only will give a perfect circle for long bows, but will also give a perfect circular hole for bows down to 30" ATA. Not yet available through your local dealers. Call toll free @ 877-607-0381 to order. Cost \$8.60 - postage included.**

**If you are not using a peep, you will enjoy the same full range accuracy, but you must rely on your consistent anchor point.**

## DEFINITIONS

**Set up pin:** The set up pin is, a 1/16 diameter by 1/2 inch long white plastic pin that is placed in a hole in the center of the sight pin holder. It is used for the sighting in process only. It may be removed when you are completely sighted in.

**The sweet spot:** Matching up the fiber optic tip to the set-up pin so it looks like they are one. **See dwg. D** You must be accurate where they match up for the sighting in process at two places - the pre-stand ground adjustment and from the treestand.

**Absolute accuracy:** You can expect to be able to hit a target as small as a tennis ball at zero yardage and maintain accurate-tight-groups all the way out to maximum range capacity. In the woods, you will not detect a change in the accuracy pattern due to treestand height or hillside conditions.

**Maximum range capacity:** With this system it is generally; Arrow speeds of up to and around 220 fps the maximum effective range is around 27 to 28 yards, 260 fps app 35 yards. Arrow speeds approaching 300 fps or more, 45 yards - plus.

**Accuracy curve:** Being accurate at close range and long range but inaccurate in the middle. This can occur when one is striving to reach out further than the maximum range capacity of the bow's arrow speed, setting an improper arrow speed adjustment, sighting in from too high of a stand or not doing steps 4 and 5

**Glow Guard:** The circular guard mounted on the bracket performs a very valuable function besides protection of the pendulum. When used with a peep sight the circular shape is matched **within the peep hole**. This action accurately aligns your bow in all directions at one time and provides easy to accomplish consistently accurate shooting. Much easier than trying to center the pin in the middle of your floating peep hole. The guard has a permanent glow-in-the-dark material in it for unmatched superior accuracy in very low light conditions. With some bows you may need a 1/4 diameter peep hole to achieve this action.

**Flipping the bracket:** For some bows this step may be necessary. When you have mounted the sight as it was packaged and you have run out of windage adjustment to the left, (right hander). The 1/4 " offset in the bracket then becomes a 1/2 " change to the left, or to the right for left handed shooting. **See dwg. C**

**Damper tube:** The rubber tube placed on the end of a screw, in the third slot. **See dwg. A** serves three important functions and must be strategically located. 1.) It can serve to hold the pendulum in a hold back position for transportation. (Simply push the pendulum back past the rubber tube.) 2.) It dampens or absorbs the swinging action if the bow is jerked during arrow draw. 3.) If improperly placed it will reduce your long range capability by keeping the pendulum from hanging straight down for a ground shot. Any shot above horizontal, (up hill) would shoot very high if the pendulum is allowed to swing back past vertical. Thus the pin becomes stationary and remains accurate at 30 yards uphill.

**Tree stand height: The best height to sight in is around 15 feet (Height at your feet).** After sighting-in you may go to any height, even 25 feet higher will not make a difference in the accuracy pattern of the PREDATOR IV. If you go to a shorter stand, such as 10 feet, you will remain accurate out at ranges of 15 to 30 yards but, you may be shooting just slightly high at 8 to 12 yards, only if you are using a very slow bow, (210 fps or less). You must check this out.

**Ground shooting:** There is no need for a lock mechanism because after all treestand adjustments are made all bows should be accurate at the 30 yard mark on the ground. Not 20 yards like other pendulum systems. Naturally you will be high at the 20 yard mark due to a natural arch in the flight path of all arrows. How high is determined by your arrow speed. A bow shooting around 220 can expect to be 5 to 6 inches high at 20 yards while a bow shooting 300 fps will be only about 1-1/2 inches high at 20 yards. In actual hunting conditions with one pin you are far better off if, it were on at a longer range than at 20 yards. **No adjustments are made for ground shooting - it's automatic.**

## BEFORE MOUNTING THE SIGHT TO THE BOW.

**For left handed:** Proceed to the paragraph "**Left handed use**", for instructions to change the set up, then come back.

## SIGHTING IN:

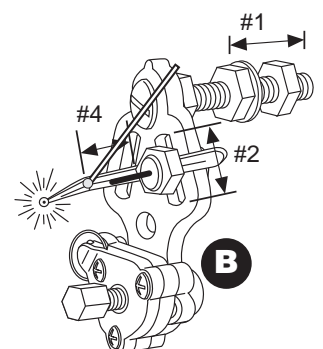
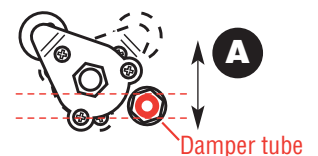
**STEP #1. - ARROW SPEED:** The arrow speed adjustment is made by movement of the pin up or down in the angled slot where the pin holder is mounted. **(See dwg. B.)** The rule is: Very slow bows (170fps to 220 fps) would be adjusted to the bottom of the slot. Very fast bows (300fps or faster), all the way to the top. Therefore arrow speed of 260 fps would be in the center. The exact placement can be critical. Being within 10 fps will suffice. If you experience difficulty in achieving absolute accuracy and you have followed the directions 2 through 5 completely, the problem will likely be with your arrow speed adjustment. But don't go nuts and move the arrow speed adjustment all the way up to the top if you are shooting a slower bow.

## STEP #2 - PRE-STAND ADJUSTMENT DONE ON THE GROUND

**Because the two pins line up on a downward angle the target must be very close - approximately 10 feet. This is a pre-stand adjustment and will put you very close when you first shoot from the stand.**

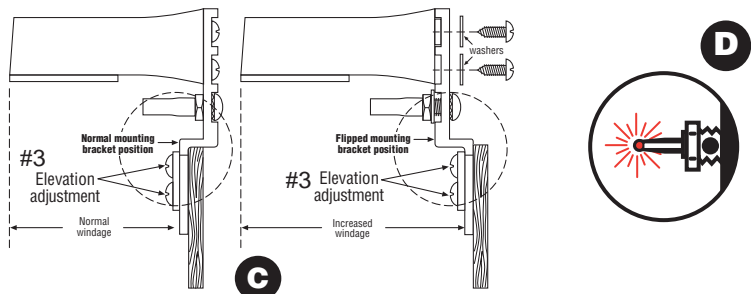
Two steps to the sighting-in process can be made on the ground level; windage and ruff - elevation. By standing approximately ten feet, (actually the distance is not important at all) from your target. With an arrow in place, draw your bowstring back and match the guard to your peep - circle to circle, (if not using a peep ignore that part) then line up the set-up pin to the sight pin to look as one.

**(See dwg. D)** This is called the sweet spot. Look for a small mark on your target to aim at like a distinct arrow hole. If your two pins line up below that mark, step towards the target until the green pin dot (fiber optic tip) is right on the hole. If it lines up above the spot, simply step back until they match. Shoot and adjust like always - move the pin in the direction that your arrow was off. Adjust windage by sideways adjustment of the pendulum mounting screw. If you run out of windage adjustment to the left (right handed shooting) you will have to **flip the mounting bracket** to gain an additional 1/2 inch windage adjustments. If needed, remove the glow guard, the pendulum and the damper tube then flip the bracket and re-mount them. **(See dwg. C)** If you run out of windage adjustment to the right (right handed shooting) an 1/8 inch shim stock of plastic or aluminum may have to be put between the riser of the bow and the sight mounting bracket. This is rare but may occur with some bows where the riser curves back over the arrow more than normal.



Adjustment elevation at the two screws holding the bracket parts together. You will be moving the whole front assembly, bracket, guard and all. **(See dwg. C)** Because you are so close to the target at this point an inch off would require quite an adjustment. Tune the sight until you can put the arrow in the mark you are aiming at. If you run out of elevation adjustment the square pad that the two screws go through for the elevation adjustment may be inverted to gain 3/8 elevation in some cases or you may have to re-adjust your peep position. The peep is adjusted the opposite direction as the pin. If hitting high move the peep lower, etc..

**STEP #3. - SETTING OVERALL TRUE ELEVATION:** The best height to be sighting in from is around 15 feet. **(Height at your feet)** The pre-adjustment you did in step 2 still must be checked from the stand. Without an arrow, draw back your bow string, look through the peep sight and move your bow up and down like you are going to make a shot at around 20 yards. You will see the green fiber optic tip moving up and down in relation to the set-up pin. Only at one point, **(the sweet spot - See dwg. D)** they will be so lined up that it looks like the fiber optic tip is on the end of the set-up pin. Have someone move the target into that area. **This should be around 20 to 22 yards.** Shoot an arrow at a spot at which you have made the pins line up. Make elevation adjustments and look for the sweet spot again. Repeat shooting and adjusting until are dead on at the sweet spot.



#### STEP#4. - MID RANGE ADJUSTMENT

While still in the stand, shoot at a target at 12 to 13 yards and adjust as follows: If your arrow went above your aim point, loosen the small brass nut holding the sight pin and slide the sight pin forward if you shot high. Slide it back towards you if your arrow went low. Care must be taken when tightening this nut. Too much pressure may bend the sight pin or it can actually cut it off. Just snug it tight and don't over do it. Actually this adjustment controls how far out in long range you will get as well as setting your ground range spot. Yes, this does sound incredible, but it works. Tune to be very accurate here

#### STEP #5. - SHORT RANGE STOP ADJUSTMENT

Still in the stand, now shoot at around 5 to 6 yards. If you are accurate, do nothing - you are done. If your arrow shoots low by more than an inch or so, (shoot several arrows to be sure it wasn't just you) this can be corrected by doing the following: Included in the sight package is a screw (#10-32 by 1-1/2 screw with a small piece of rubber tube on it, two nuts a flat and a star washer.) Install the screw into the upper corner of the first slot out in front of the pendulum. Adjust outwards until the length of the screw is in front of the pendulum body. Put the short rubber tube on the end of the screw so there will be no noise made when the pendulum makes contact with it. Adjust down to make the pendulum stationary at that 5 or 6 yard shot. Adjust it down until you are dead on but be sure that the short range stop does not touch the pendulum at the point you adjusted for the 12 to 13 yard mid-range adjustment. Now shoot at various distances - short and long range to be sure you are accurate everywhere and find out what your effective maximum long is. You have completed the sighting process and can go to any height of stand and expect to get complete accuracy within your maximum range limitation, even on a hillside with additional drop.

**Removal of the set-up pin.** Hold the pendulum body firmly and remove the set-up pin with a pair of pliers. **Scotch tape it to these instructions for future use.** Some customers have left it in and clipped the end off by 1/8 inch and others just left it as is. However, if you do lose it, use the small end of a flat tooth pick cut to 1/2 inch long to re-tune.

**The new .040 diameter fiber optic filament is tougher and has more light collection surface and length than before. The light collecting filament can be positioned as in drawings 1 & 2 J. For left handed use see dwg E. There is a bend in the fiber optic filament where it comes back through the pin material. Do not attempt to straighten it out for any reason - it will break! It may be bent up a little more with no problem but will break if bent back towards being straight.**

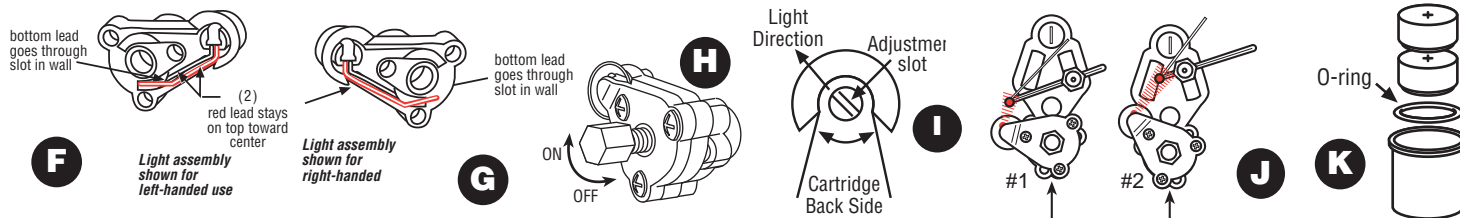
#### LIGHTED MODEL ONLY

**DO NOT ATTEMPT TO ADJUST THE LIGHT UNTIL YOU ARE FULLY SIGHTED-IN!** If you twist the slot too much the leads on the LED can be broken very easy. **Look at the backside of the pendulum and look at dwg. I. The adjustment slot points in the direction which is the center of the LED. Move it slightly until the slot is pointing at the fiber optic filament on the front of the sight pin. Do not twist it back and forth or you will break the leads on the LED. Go to a dimly lit room and check it out.**

#### ADJUSTING LIGHT ASSEMBLY

The sight comes assembled as in **dwg. # 1 J.** If after sighting in is complete and your pin position is more like **dwg. # 2-J,** adjust the light assembly upwards to the other set of screw holes to get the illumination of the LED closer to the fiber optic on the front of the sight pin. Be sure to have the three screws snug to keep contact to the LED components. Adjust the light by turning the slot (**see dwg. I**) aiming the LED at the fiber optic filament. Slow bows with arrow speeds 230 fps or less must keep the pendulum in #1 position.

**In the light assembly the top wire, with red paint, must remain on top. The bottom wire must go through a very small slot in the wall of the housing to make contact with the brass battery holder rim. When you tighten the screws - be sure they are snug.** The LED, (miniature light) will not light if; (1.) the screws are loose, (2.) the batteries were not replaced properly, (both must be with the flat end up) (3.) the lead wires are reversed or broken, (4.) if the batteries are dead. As years pass the brass parts may oxidize and not make good contact to the bottom of the battery holder and/or the LED wires. A little scuffing with sand paper at the contact areas will make for better contact. Clean the inside bottom of the battery container if needed. It is very rare for an LED to burn out, however they may be purchased by calling our toll free number. **To change batteries:** Remove the three screws holding the cover. Replace the batteries with PREDATOR PRODUCTS replacement batteries, AG-5 or the most common #393 battery found at drug stores, mass merchant or sporting goods stores. It is the same size used by other lighted sights. To replace batteries (**See dwg. K**).



**Left handed use:** First, to save time and fuss, examine your bow now to determine if you will have to "flip" over the mounting bracket to gain windage. If the bow riser surface where the sight is to be mounted is more than 1-1/4 inches from the center line above your arrow you will have to flip the bracket at this time. If you need to flip the bracket remove the guard and everything from the bracket and re-mount them on the bracket side that has the nut locking ribs, (**See dwg. C-2**) but in mirror image for left handed. Or, otherwise follow these steps: 1.) Remove the pendulum from the bracket. Holding it in your hand you will see that the sight pin is being held by a pin holder that is mounted in the right hand angled slot for the arrow speed adjustment. 2.) You must remove the pin and pin holder. 3.) Install them in the left hand slot with the sight pin crossing the pendulum body towards the right and the light collecting end of the fiber optic filament below the pin holder and nut. 4.) Now, the light assembly needs to be re-arranged as in **dwg's. F and E.** 5.) Take off the damper tube and re-assemble behind the pendulum as in **dwg. E** for normal mounting. 6.) Re-mount the pendulum in the middle slot so you have around 1/8 inch clearance on the bottom above the Glow Guard.

#### ADDITIONAL INFORMATION:

**DO NOT USE LOCK-TITE or other like products at or near the plastic components.** It will attack the material and was found to be unnecessary as the plastic parts will lock the screws in position.

The ball bearing has been impregnated with a synthetic lubricant to reduce unwanted swinging action. It will help to keep rain out and it will not freeze. Never clean with any kind of solvents.

If you purchased the unlighted system you may upgrade to the lighted system by seeing your dealer or call PREDATOR PRODUCTS Co. Ask for the LED ADD-ON LITE.

