Archery Focus

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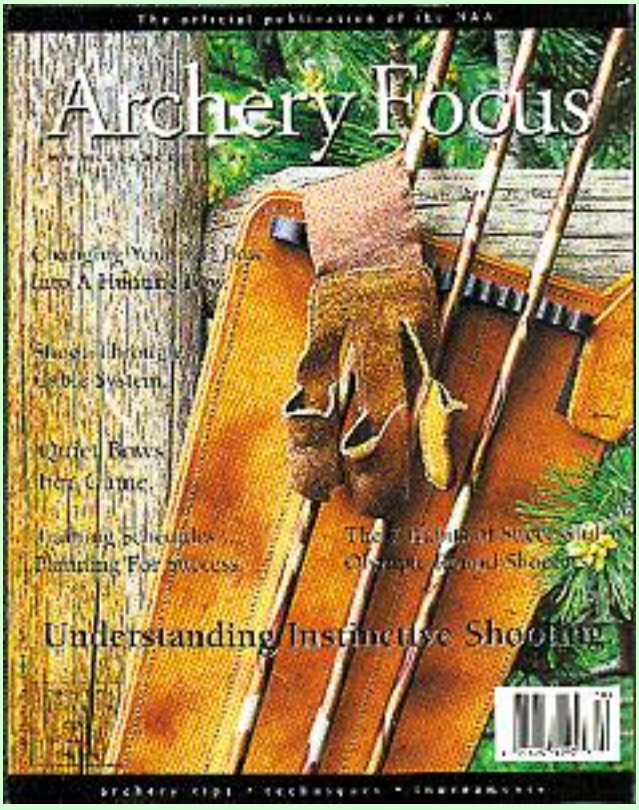

NOTE

Prior to the Vol. 3, No. 3 issue all we inheirited were individual articles from the AFm website. With the help of a generous subscriber were were able to download those articles and convert them to our present file format. This "Whole Issue" has been reconstituted from those files and so doesn't look exactly like the current issues.

Traditional

Understanding Instinctive Shooting

By T.J. Conrads

The purest form of shooting a traditional bow requires nothing more than using your God-given talents of eye/hand/brain coordination.

Taking the snap, Joe looks to his left and sees a defensive linebacker cutting through his offensive line. He fades back, then lurches forward, trying to find his pal wearing the number 80 jersey. Streaking from right to left, Jerry Rice turns and makes eye contact. Montana, without so much as a split second of wasted time, fires the football, watching in slow motion as the ball and Rice converge at a space in time on the field, just before he feels the dull thud of a helmet cave in his side...

Two fingers down and in on the thigh; a low curve to the inside. Nolan takes the sign, makes a false look to first, and fires the pitch. Ryan has not completed his follow through by the time the ball, after being wafted by the batter, is setting in the catcher‘s glove, exactly where it was supposed to be...

The deer is bounding pell-mell across the slope in front of the hunter. With a quick motion, a broadhead-tipped arrow is pulled from his backquiver and placed on the bowstring. The archer, without so much as a thought about it, draws the bow to his cheek, leads the running animal, and releases in one smooth, fluid movement. And again, the arrow and deer meet at a place in time, and the archer has claimed his animal with one well-placed shot....

How did these athletes all make such calculated and difficult maneuvers, under stress and excitement without some sort of aiming device? Isn‘t that impossible? No, it‘s not. And every one of you can do exactly the same thing.

Do these three scenarios sound strangely familiar? They should, because each of them are performed on a regular basis by countless individuals who have mastered what we call hand/eye coordination, something every human can learn. It is the same as being able to lift a stone and hit a tree in the distance, or throw a Frisbee to your friend and hit the mark exactly. By no means is it impossible.

But it will take time, practice, and it will take dedication. But then, doesn‘t everything that is worthwhile in life?

Shooting your bow instinctively, and shooting it well, is one of the greatest pleasures in archery. Simply put, it is teaching your brain, body and eyes to work in unison to achieve the desired results: hitting what you are looking at. It is not magic, it is a deliberate process where, through repetition, your body learns how to hold and point a bow to have the arrow hit what you have chosen to hit. And unlike gap shooting or indirect aiming, you do not use anything for a sight; you just look at what you want to hit and concentrate on the spot. Your brain will take over from there, if you let it.

Still not convinced? Try this: Look at an object across the room, or outside the window. Concentrate on that object, close your eyes and then point your finger where it should be. Now open your eyes and see how close you came. Pretty close, isn‘t it? You see, you already have the ability. It just takes time to develop it more thoroughly for shooting a bow and arrow. For the traditional archer, you will need to shoot you arrows off a rug rest, not an elevated one. This places the arrow closer to the hand, which is what you are pointing the bow with. By placing the arrow low, it should ride just above your hand while holding the bow, acting like an extension of your index finger, just like pointing toward your target. Remember how close you were when you closed your eyes and pointed at an object? Same theory, but you can keep your eyes open now!

Once you have your arrows shooting straight from your rug rest you can start concentrating on developing your instinctive eye. Place some sort of a target on a few straw bales and get back about ten yards. I would suggest a paper plate with a one inch solid black dot in the middle made with a Magic Marker. Now, while concentrating on the black dot, come to full draw, anchor and release. Do not try to aim. True instinctive shooting is when you are not aware of anything but the spot you want to hit. If you have shot your bow much at all, you should be fairly close to the black dot. The more you shoot, the closer you will get until you will be able to keep most of your arrows within a tight group. In fact, you will be hitting the dot more and more as time goes on.

Once you can keep the arrows close to the little black dot, start increasing your distance until you feel comfortable at the longer distance. If you have the room, the best way to learn instinctive shooting is with Zwickey Judo tips, roving in the woods or a field. Pick different targets with each shot - a leaf here, a dirt clod there, the rotten stump over there. Shoot only one arrow at each target seeing how close you come to it. Evaluate each shot. Did you really concentrate on that leaf? Roving is the best exercise you can do to learn instinctive shooting well.

One of the finest instinctive archers I ever knew was Paul Schafer. His feats are widely known in the bowhunting circles, having taken the Grand Slam of sheep with his recurve and countless other animals. Paul used to practice shooting arrows at 70 to 100 yards, even though he never shot at animals that far. His theory was that by shooting at long distances, he could teach his brain to see and understand arrow flight at all yardages, knowing the trajectory of his arrow. His shooting proved his theory only too well. On one hunting trip his partner had shot an elk and they had gone to retrieve it. Paul had left his camera sitting on a stump and they were going back to get it when his friend, always ribbing Paul about his so-called expert instinctive eye, dared him to hit his camera. At just under 100 yards away, uphill, Paul accepted the dare, drew an arrow and proceeded to shoot at his camera. The arrow slid through the lens on the front of the camera and out the back. "It was the fact he said I couldn‘t hit it," Paul later recounted, "that made me take the shot." That‘s how well instinctive shooting can work for you.

Some people have suggested that pure instinctive shooting is just another form of gap shooting, where you are really just using the tip of the arrow as some sort of aiming device. However, I don‘t buy that idea for one second. I have been shooting a bow for over 25 years and have never seen the arrow sitting on the shelf when I shoot. If I make an effott to see my arrow, I will not hit my target. All I see is where I want to hit, and concentrate on that spot and the mechanics of drawing and releasing the arrow. No, I’m not the best archer in the world; far from it. But I have extreme confidence in my shooting ability and know my effective range.

And so can you by giving instinctive shooting a serious try.

Author‘s Note:
My good friend G. Fred Asbell wrote the book, literally, on instinctive shooting. Called, appropriately enough, "Instinctive Shooting", Fred walks the reader through the total theory and practice of using and becoming proficient with shooting a bow instinctively. He also has a wonderful new book, "Instinctive Shooting II", and a video which goes along with the book to aid in visually understanding the entire process.

Since learning to shoot a bow instinctively takes much more information than what I can give you here, I highly recommend you pick up a copy of Asbell‘s book. For more information on his books and video, contact:

Hunter Image Productions
P.O. Box 399
Burlington, IA 52601

College Archery

The Obscure Division
A Look Into College Archery
By Jessica Carlson

James Madison has a great archery program headed up by Bob Ryder. This is a few of the men on their team.

After returning from the USIACs, otherwise known as the Collegiate Archery Championships, I realized that college archery offers shooters more than I, or the rest of the archery world, ever knew. The collegiate division can offer a shooter many things. One, it can be a transition division for JOAD shooters looking to shoot in the adult division. Two, it provides a top shooter training for the Olympics; an opportunity to practice with others that are striving for the same goal. And three, it can be a great way to draw beginning archers into the sport. Everyone, no matter what level they‘re at, can enjoy being part of a team and participating in the competitions with archers the same age as themselves.

Many former Olympians have been part of the college archery experience. For example, Jay Barrs, Rick McKinney and Judi Adams all competed in college archery; which eventually helped them on their roads to the Olympic Games. And even now, there are top archers with international tournament experience in both compound and recurve divisions competing in college archery. Besides myself, Vic Wunderle and Jamie Van Natta both competed at this last Collegiate Archery Championships. On the other hand, there were many archers shooting the Collegiate Championships as their first organized competition ever. This tournament has an award that I found to be very encouraging for new shooters. They give out an award for the beginner with the highest score. The archer has to have had no prior experience besides a brief camp encounter, and have started shooting within the academic year. There are some very promising archers who were given this award.

Besides the Outdoor Nationals, there are opportunities for competition on the regional level, at the Indoor Target Championships, as well as a variety of club and invitational events. There is also a popular mail-in tournament held during the winter. Tournament directors are being encouraged to hold a collegiate division whenever possible.
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If you are an archer going to college at a school that does not currently have an archery club, it‘s easy to set one up. If you contact the NAA (National Archery Association) they will set you up with a membership for your school. The beginning membership fee is $50. However, if you are the sole archer for the beginning year, the NAA will waive the $50 membership fee. This gives the club the opportunity to search for members and still compete at the USIACs. A prime example of this would be the club set-up at the University of Toledo. Jamie Van Natta chose to go to school there; she has managed to get a variety of people involved and has started a club. In most cases there are plenty of people willing to participate, it just takes someone to get the program set-up.

Representatives of James Madison University’s Women’s Archery Team.

I would encourage anyone with plans to go to college to look into starting a club of their own, or joining clubs present at many of the colleges throughout the United States. Archery is a sport that one can spend as much time on as they want. If students want to spend hours practicing, that option is available. However, if students are just looking for something extracurricular in which to spend a little free time, archery can be lots of fun. For advanced shooters, it‘s a wonderful opportunity to be able to continue to compete while in college.

Compound Tech 100

It's the Little Things That Make A Difference.

By Drew Wilcox

Drew Wilcox

As with most things, it's the little details that can make the difference between just shooting and shooting well. Most first- time archers will develop the foundations of their basic shooting form in their first couple of outings. From there, it becomes a matter of refining that form to its best possible performance. In this installment of Compound 100, we'll take a look at a couple of these little things, and try to point you in the right direction to getting them to work for you.

Most archers out there, at one time or another, have experienced the frustrations of what I refer to as migrating groups. After an archer's basic form has started to take shape, many will start to realize that although their groups are nice and tight, they aren't always in the same place on the target. Although on occasion this can be attributed to a mechanical issue, usually it will be found in the shooter. Keep in mind, as a general rule, if it does exactly the same thing every time, good or bad, it's the equipment. If it's the occasional odd occurrence, or inconsistency, it's something you're doing.

The more common causes of the migrating group would have to be found in the sight picture, head position, bow hand position and/or pressure, or in a shifting anchor point.

Sight Picture

The term is pretty self explanatory, it refers to how the archer lines up and looks through their sight in relation to the target. The most common short coming for an archer's sight picture is failing to center the aiming point of the sight in the middle of the peep. The arrow will react opposite to the aiming point. If the pin is to the left in the peep, the arrow will impact to the right on the target and so forth. The fix is quite simple for this. As you are aiming at the target, double check that your peep, sight and target are centered through the entire shot.

Head Position

Remember back to little league when your coach was always telling you to keep your head tucked in and your eye on the ball? This is kind of the same thing, letting your head rotate left to right, or hinging up and down will effect the triangulation between your eye, anchor and aiming point, which will in turn result in ... that's right, inconsistent arrow placement. This type of problem is usually attributed to the peep sight being too high or too low; forcing the shooter to "look" for the peep. However, sometimes it can be related to a poorly fitted draw length. One way to detect this problem is to video yourself shooting. This will help you actually see how much you are moving your head to get in-line with the peep. It's one thing when someone tells you that you are doing something wrong, and another when you can actually see it for yourself.

Hand Position and Pressure

I‘ve seen many different hand positions and heard the various philosophies as to which is the best way to place your hand into the grip, but to be honest, it merely comes down to what feels the most comfortable to you. The big trick is doing it the same each time you pick up the bow. Shifting your hand around in the grip will actually change the way the bow reacts to the shot, again affecting your point of impact. Once again, it all comes down to a matter of consistency. The feel of a grip should be one of the contributing factors in the purchase of a bow. Test the grips and feel which one is more comfortable in your hand. If you have to force yourself into the grip to be comfortable - you‘re wasting your efforts.

I see many first time archers being given instructions such as "don‘t grab your bow" and "open up your bow hand". I‘d like to change that a little. Grabbing your bow will create tension in your hand that will, in turn, create torque on the bow and affect its performance. What many new archers don‘t realize is that forcing your bow hand open will create the same kind of tension and generate the same types of inconsistencies. All you really need to do with your bow hand is learn how to relax it. Let your wrist, arm and shoulders do the work. One piece of advice when refining your bow hand ... Make Sure You‘re Using A Sling! There‘s nothing quite as ironic as watching $2,000 worth of archery tackle go bouncing down range as the result of a GOOD shot.

Shifting Anchor Point

A shifting anchor point can, once again, be caused by an improperly placed peep sight; causing you to look for the sight picture. If the peep sight is too far off, you will fall into a trap of a "floating" anchor, where your hand doesn‘t seem to be touching anything. Keep your anchor consistent against your face. Be aware that your angle of the hand and release are consistent with each shot. Once again, you can use a video camera to confirm its consistency if you are unsure.

Well, that is all for this time. As always. if you have any problems or questions, stop in at your local pro-shop. The folks behind the counter will be sure to get you on the right track.

Hunting

Quiet Bows for Game

By Chuck Adams

In many hunting situations, a full-length, medium-weight arrow is best for quiet shooting.

Most species of big game have a nasty little habit called "jumping the bowstring". Some animals are jumpier than others. Sharp-eared, fast-footed and unusually jittery critters like whitetail deer, pronghorn antelope, African impala antelope and European mouflon sheep posses an uncanny ability to hear your bow and avoid the arrow before it arrives.

Quiet bows are not essential in target shooting. A bull‘s-eye or McKenzie foam animal does not flinch or jump from nearby racket, and a buck on a video shooting screen does not crouch and spring away. By comparison, real animals can duck arrows with ease.

Some bowhunters believe a very fast arrow can beat an animal‘s reflexes. I chuckle at the very notion.

A recent study I conducted of deer being shot at on slow-motion videotape proves just the opposite. The average whitetail deer at an average shooting distance of 20 yards crouched 6 to 8 inches before the arrow arrived from a noisy bow. Some managed to crouch and spring completely away before the shaft reached them. Since a deer has a vital chest zone only 8 inches deep, it does not take a rocket scientist to figure out that deer need only crouch 4 or 5 inches to avoid a lethal hit.

Based on the speed of projectiles being shot in my study, I decided an arrow would have to fly over 600 feet per second to bag a 20-yard deer that heard the bow and fully reacted. That‘s almost twice as fast as the fastest hunting arrows being shot today!

Be sure to tighten all bolts and screws on your bow. Loose connections like the quiver mount can buzz, scaring the heck out of game.

A hunting stabilizer definitely improves accuracy. Flexible models like the rubberloaded 'Torque Tamer' from Saunders will absorb noise causing shooting vibration.

Actually, I believe a medium - to heavy-weight arrow is superior in most hunting situations. Since you cannot beat a deer with arrow speed, why shoot very lightweight shafts that waste bow energy and cause excess noise? An overdraw set-up is essential to win 3-D tournaments, but heavier full-length arrows mean a quieter bow. You can't counteract an animal's reflexes, so you must fool its ears.

For hunting, I prefer an arrow that weighs at least 7-1/2 or 8 grains per pound of draw weight. With a 60-pound compound bow, this means an arrow weighing a minimum of 450 to 480 grains. Such an arrow typically flies between 230 and 275 feet per second, depending on bow style being used. Such a shaft absorbs more bow energy, which in turn results in less string, limb and bow-handle vibration during the shot. Less vibration means less game-spooking noise.

Arrow weight alone cannot hush a hunting bow. Here are three standard bow-silencing procedures:

1. Attach commercial silencers to the bowstring 5 to 10 inches from each limb tip. The best I've found are so-called "catwhiskers" - clusters of thin rubber filaments. Other silencer styles made of acrylic fiber also work, but tend to absorb game-spooking odor when wet and do not reduce bowstring "twang" as effectively as rubber.

2. Affix a rubber-loaded or hydraulic stabilizer to the front of your bow. Solid metal stabilizers absorb some vibration and sound; stabilizers with flexible components absorb a lot. The best bowhunting stabilizers are less than 12 inches long for good maneuverability in the woods. Most weigh between 6 and 12 ounces.

3. Tighten all screws, bolts and other hard connections to handle riser and limbs. One slightly loose bow quiver bolt, arrow rest screw or sight pin can buzz like a castanet during the shot. This will send wary animals ballistic. Some hunters have actually chosen to go away from the bow quiver all together to avoid the noise and weight.

An easy way to test your bow set-up for loose and noisy connections is to hold the top of the handle riser in one hand and thump the handle sharply near the grip with the palm of your other hand. This will vibrate the bow like actual shooting does, and will let you zero in on noisy trouble spots. If the bow thuds dully when you smack the handle or take a shot, animals won‘t be as likely to jump the string.

A hard-jaw mechanical bowstring release tends to strum the string like a guitar pick during the shot. Finger shooters have bragged for decades that a tab or glove produces less game- spooking noise than a release aid. This tends to be true, but a soft release loop tied to the bowstring does much the same thing. So does a rope release, but rope releases are awkward and slow for most bowhunters to use.

In general, the best tuned and most accurate bows are also unusually quiet. Bowstring energy flows smoothly through the nock and into the shaft with a minimum of vibration or wobble. The arrow launches unobtrusively and quietly. By comparison, poorly tuned set-ups are usually loud.

Sharp-eared, quick footed game like pronghorn antelope can jump the bowstring in a flash. You need a quiet bow!

Don‘t make the mistake of thinking a deer, antelope, or sheep will not hear your carefully silenced bow. No bow is perfectly quiet, and nearby animals usually hear the dull thud of the arrow being released. But animal reaction is notably different when a bow thuds instead of banging or rattling. Usually, the animal will slightly flinch or crouch in front of a quiet bow. When confronted with a noisy bow, the same animal is apt to come unglued.

Here’s one last tip about quiet bow shooting at game. In general. you’re better off taking 25 to 40 yard shots if you posess the necessary archery skill. I’ve kept recoeds on more than 500 animals I’ve shot at by myself and other bowhunters, and those inside 20 yards have been four times more likely to duck the arrow than those beyond 25 yards.

Nocking Point - A Critical Issue

By Rick McKinney

The nock drops down upon release, thus a double nocking point should be used

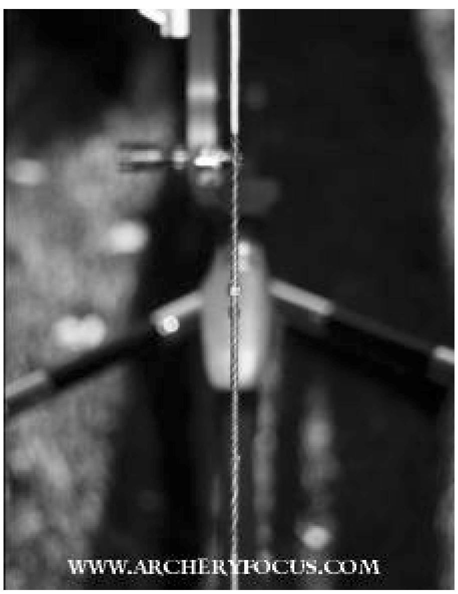
A nocking point is a crucial part of your equipment set-up. The basic reason for a nocking point is to make sure that the arrow placement on the string is exactly the same every time. When the nocking point is correct, the bow is shooting in a state of "dynamic balance", where the limbs are traveling at the same speed and the tips end up at the same place (in a mirror image) when the arrow leaves the string. Dynamic balance gives the arrow a truer flight path without it porposing up and down to the target.

The easiest way to find the proper nocking point is to tune using the bare shaft method. Begin by shooting three or four fletched arrows into a target at about 15 or 20 yards away. Once you are able to see a grouping pattern, shoot two or three bare shafts aiming in the same place as you were while shooting the fletched shafts. The reason for shooting two or three bare shafts is to make sure that your form is consistent enough to get some type of grouping. Also, you want to check to make sure that you do not get a bad bare shaft. Sometimes the shaft may have a bad nock, a bad point or something else that makes it shoot outside the group. This is not always due to you. That is why it is always recommended to shoot more than one bare shaft and also pick your best arrows for the bare shaft test. Usually of the three shafts, two will group (if not all three). Always use the bare shafts that are within the group to adjust from.

If your bare shaft hits low of the grouped fletched arrows, then move your nocking point down. If it hits above the grouped fletched arrows, move your nocking point up. Do not worry about the right or left impacts of the bare shafts. That is for another discussion. The main focus is getting your nocking point set right. Once your bare shaft is hitting directly left or right of the fletched shafts, then your nocking point is as good as it can get.

Should you use two or one nocking point? It is important to test and see if you need a second nocking point. Most, if not all archers, will need two nocking points because the arrow drops down from the top nocking point when the archer releases the string. The easiest way to test to see if this is happening to you is to add a second nocking point and see what happens to your groups. Shoot more than one distance if possible, like 20 yards and maybe 40 or 50 yards. Then take the bottom nocking point off and see if the arrows impact in the same place. If your arrows go high with just one nocking point, it is usually because the arrow dips down upon release and the arrow impacts higher on the target. If your arrows impacts in the same place, there is a good chance you do not need a double nocking point, unless you just want one for security.

This is an example of the Beiter nocking point. This nock set is served right into your string.



In this case, the archer has used a Saunder's metal nock set for a top nocking point and nylon for a bottom nocking point.

Another factor to consider when setting your nocking point is what type of material to use. The easiest and most accurate method is the Saunders metal nock set. It is extremely easy to set and because it is metal, the plastic nock, on your arrow, is located exactly in the same position every time. However, it is heavier than other nocking points. This will cause the string to travel at a slower speed and cause a different tune than when using dental floss, rayon or nylon as your nocking point.

Another type to consider is the Beiter nocking point. It is a plastic molded piece that you serve with your serving. It is very light in comparison to the metal nock set. However, it is just as accurate.

If you use dental floss for your nock, you will need to keep an eye on the nocking point since the plastic nock will eventually wear down the material and your nocking point will be a bit higher than when you originally set it. You will need to re- tie the nocking point. If you use rayon or nylon, you can just tie the material on to the serving. Once it is tied on, you can use a little glue such as Fletch-Tite, NVP or Flex-Bond to keep it in place.

Make sure that whichever nocking point you use, keep it flush with the arrow all around the string. Sometimes you set your nocking point and it is not square with the string. This causes the arrow to impact high and/or low because your arrow is not placed exactly in the same location as the string twists.

Once you have found the right nocking point location and have either tied on the nocking point or

clamped it down, you are ready to go. Just keep an eye on it from time to time to check for wear. Put a mark on your bow square to the exact location so that when you want to replace the nocking point all you have to do is refer to the marked bow square.

One final thing. When using two nocking points, make sure there is enough room between the two to allow the nock to position itself while at full draw. If the two nocking points are too close, it can cause your arrow to fly inconsistently and tune poorly. I recommend about 1/8" distance between the bottom of the nock and the bottom nocking point.

Compound Tech 200

Changing Your 3-D Bow Into a **Hunting Bow**

By John Dudley

There are just a few adjustments you will want to make to your 3-D bow in order to hunt with it.

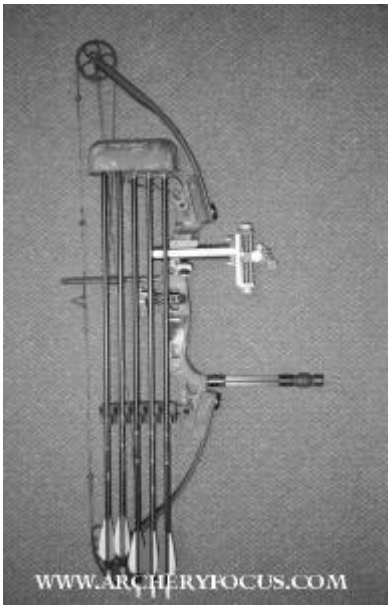
Here it is September and 3-D season is all over. If you're like me, you probably feel a little burned out from all the shoots. Tired of traveling, tired of judging targets and definitely tired of just missing the 12 ring by a fraction of an inch. Well hey WAKE UP! It's hunting season. 3-D was originated for hunting practice, and for the past 6 months we've been doing some serious practicing for the hunting season. Almost everything is honed in for this season. Your form is good and you can judge the targets. Now all you need to do is make your 3-D bow into a hunting bow.

Setting up your 3-D bow for hunting purposes is actually quite simple. Well, it's simple unless your 3-D bow is anodized some pretty color like silver or gold, then we may have a problem. You'll either need some blind wild game or about 10 yards of camo moleskin. However, I will assume your bow is already camo or a green or brown. After making sure your bow is acceptable for color the next step is your peep sight.

Your peep sight is one of the most important devices. It enables you to see well during hunting. You've probably been using a smaller diameter peep for target shooting, which is great for accuracy, but poor for low light situations. What you will need is a large diameter peep. The smallest peep size I would recommend for hunting would be a 3/32. The ideal size, however is a 1/8 peep. Personally I like to use a Super Peep from Specialty Archery Products. The Super Peep system enables the shooter to screw in any diameter peep they wish. I found out it's great to have some different options for hunting. Equally important, is to make sure your peep aligns itself. This can be done one of two ways. One way is to use a good string, like a Zebra string, that prevents peep rotation. Another way is to use a peep aligner. However, the aligners tend to have some drawbacks. They're a bit noisy and the rubber tubes tend to rot easily. Since we've installed a peep we can move on to the sight.

You probably won't have much success using your 6-power scope and little orange dot for hunting. We need to add a quality hunting sight to the bow. I've found that the sight takes more wear and tear than any other part on the bow. Because the sight extends out past the bow, it is apt to snag limbs, twigs or anything on the way from the tree stand to the ground. For those of you who are like me and shoot a Sure-Loc sight, this adjustment will be minor. Just get a hold of the 4 pin 3-D attachment from Sure-Loc and screw it on. Otherwise you'll need to shop around and find a sight to suit you. What you need to look for in a sight is durabilty. Plastic sights don't last very long on my bows. A good machined aluminum sight, either moveable or with fixed pins will work well. With all sights, there are a few different types of pins to consider. There are fiber optics, solid pins or illuminated pins. The highest percentages of kills are made just before dark. This is why fiber optic or illuminated pins work really well for hunting. I usually set up my pins a little different for hunting. What I do is use my top pin for 25 yards, second pin 40, third 50 and my fourth pin for 60. The reason for this is spacing. With the pins set up in this format, it will give you a better view of the animal. Pins that are set up in a close gapping way seem to block out the target in low light. The 25- yard pin can be used for any shot up to 30 yards. Just hold it low for 20 and high for 30. Practicing with your bow on 3-D targets will get you familiar

with where to hold with your set- up.



Adding your quiver, changing the sight apperature and shortening the stabilizer are all adjustments that need to be made to your bow before taking it out into the field.

Another key to transforming your bow is a good arrow rest. Most likely it would be really easy to use the rest you already have on the bow. All that would need to be done is to make it quiet. Rubber tubing, Teflon arms or mole skin serves well for silencing. For example, my rest is easy to get ready. I buy a package of moleskin to last me for the whole year. I cut small strips out and stick them to the launcher arms on my star- hunter. Done! Real simple. As these wear down they may need to be replaced. Usually I put on some fresh moleskin before each hunting trip. My only other recommendation would be to shoot a rest that will allow you to keep the broadhead in front of your hand. Now that the bow is all assembled and ready to go, we'll need some arrows.

Choosing the right arrow shaft is critical. Last month's article "Which Arrows Should I Use for 3-D?" can be applied to this article in some ways. My only recommendation would be to choose an arrow that is durable, and has a thicker inner wall. A heavier arrow generates much more kinetic energy than a light one. Once you've selected the right shaft, you will need to purchase a good broadhead to put on the front of it. There are many great broadhead companies that provide solid, sharp, durable broadheads. There have been many articles written about different broadheads, and with some research you will be able to decide which will suit you best. Now on to vanes and feathers.

Obviously, 2" fletching and 80 grain nibbs aren't going to work for hunting. Depending on the broadhead, I would recommend a minimum of a 3" vane or feather. Expandable broadheads will fly well with a shorter fletch. Fixed broadheads usually steer great with longer fletching. Unless you're hunting turkeys, a bright colored fletch will assist you in seeing what kind of a shot was made on the game.

There are a few other small parts that a hunting bow will need. For starters, the 36" stabilizer won't really cut the mustard, unless maybe you can hunt off your deck. A short stabilizer will be all that's needed. A 10" or shorter stabilizer will prove to be excellent, both for weight and maneuverability. When selecting a stabilizer for a hunt, the main focus is to find a product that will absorb vibration and noise. Carbon rod stabilizers or hydraulics absorb energy nicely. In addition, a broadhead quiver will be needed. There are about 3 different styles to choose from. The first being a hip style quiver designed for stalking and reduces the overall weight of the bow. Second, is a quiver designed to be permanently attached to the bow. These quivers are nice, but tend to get heavy after a few hours of hiking around. Another option you have is a detachable quiver. These are especially nice for treestand hunting. With the twist of a screw, the quiver can be detached and hung on a limb in the tree with you. A final thing that will need to be done to your bow is camo.

Any reflective parts of the bow can be disguised with a simple black marker. A package of moleskin will come in handy on the bow riser shelf by the arrow rest. This way, if the arrow falls off the rest, it won't make any terribly noisy sounds. Finally some moleskin around the grip can help reduce the possibily of getting your hands cold from the riser.

Hopefully your 3-D setup is now converted to a hunting machine. Make sure you hunt ethically and respectfully. I hope everyone has success on all their hunts. Use the skills you've been practicing all year. See you in the woods.

Ulmer's 3-D Tip:

Set Realistic Goals for Long Shots

By Randy Ulmer

It is important to understand your capabilities at longer distances and stay within those parameters

When you're confronted with a very long or difficult shot, your expectations should be determined by your skill level. A professional 3-D shooter may encounter a forty yard turkey target and shoot for the twelve. Most average shooters would be better advised to focus on the ten or even the eight ring, because more often than not, trying too hard will lead to tension and a poor shot.

Ideally, every shot you shoot should be executed the same way, whether its at twenty yards or fifty yards. Remember the old adage: Perfect archery is simply repeating everything exactly the same way every shot. You shouldn't try to aim harder at the longer distances.

You can prove this to yourself by looking at the pattern of arrow holes in a long target. The left and right component of the group is relatively larger than it should be, as compared to a close target. A 50 yard target should, theoretically, have a group exactly twice as wide as a 25 yard target. In tournaments, however, the 50 yard target will have an average group size much wider than twice that of the 25 yard target. I believe it's because of the "intimidation factor" of the longer target. Shooters try harder and in trying harder change their form.

Each of us knows what his/her average group size is at forty yards. If your average is five inches, you should be satisfied with holding that well at a forty yard turkey target. IF you fool yourself into believing you can hit a half inch twelve ring at that distance you're setting yourself up for disappointment.

Next time you're shooting a long target, let yourself float like you would on a twenty yarder. Concentrate on form and relaxation and let the bow shoot the shot. I think you'll be pleasantly surprised at the results.

The Seven Habits of Successful Olympic Round Shooters

By Lloyd Brown

Janet Dykman and Courtney Kane are two American women shooters who have performed well in shoot down tournaments.

Lloyd Brown was the 1996 U.S. Olympic Archery Team Coach and is the personal coach of double Olympic Gold Medalist, Justin Huish.

As coach of many U.S. Archery teams, I have been close to many champions as well as the winning impaired. By talking to these athletes and observing their behaviors, I have noticed some common mental skills among the most successful Olympic Round shooters. These are skills that can be learned by anyone and must be mastered to excel in any sport, but are especially important in Olympic Round competition. You can learn the mental skills that make you a champion just as you learn the technical skills - through practice. Mental skills are merely habits that you can form to help you from entering what I like to call "The Dark Side." Instead, these habits can help you turn those thoughts around and change your focus to the "Positive Side."

Archer‘s always feel that they need to work on their "mental game" but they don‘t always know where to start. Above all, you have to learn to coach yourself. You need to train your inner mind to think like a champion. Here‘s a list of mental habits that you should develop to be a successful Olympic Round competitor.

1. The ability to quickly forget your past mistakes.
One of the most common traits among champions in all sports is the ability to quickly forget their mistakes. Champions think about their best shots and how they are going to perform the next shot. The more you think about, talk about and visualize a shot, the more likely it will happen again. Do you want to think a lot about the good shots or the bad shots? When you shoot a bad shot, get over it quickly. You know it was a bad shot, now think about a good shot. Visualize the next shot - one you can do something about. When you shoot an arrow that feels perfect, ingrain that feeling in your mind. Reward yourself by enjoying the feeling.

2. Positive Self Talk and Imagery.
Champions use their inner-mind to remind themselves of their abilities. To be a champion you must become your own coach. Learn to think positive thoughts and focus on what you want, rather than allowing yourself to think of negatives. Make your inner-mind work for you as a coach. Learn to visualize the execution of the perfect shot, and do it often. Many archers would fire their coach if they talked to them the way they talk to themselves. When you catch yourself drifting towards the dark side, try screaming "NO" inside your mind. Then talk to yourself with positive statements and start focusing on imaging perfect shots. You have to learn to turn your mind around quickly. Remember, you only get 12 shots.

3. A mental program that focuses on what to think.
Many top archers have developed a mental program that gives them a series of conscious thoughts to follow throughout the shot; allowing their subconscious mind to perform the shot with consistency. This type of program helps to keep your mind occupied so it doesn‘t have time to think critically.

4. Ability to focus on the match.
This is the ability to stay focused on the performance of the shot, rather than the possible outcome of the match, the next match, winning, losing, or dancing naked on the beach in Tahiti. Stop yourself when your mind starts to drift and get back on track with your mental program. This takes discipline, but it can be learned.

5. Love the Pressure of Competition.
You have to love the pressure of competition to succeed. Anxiety, nerves and pressure are all positive feelings. Learning relaxation techniques are fine, but never view anxiety as a bad thing. Everyone feels it. Shooting with nerves is like shooting in the rain; your competitor feels it too, you just have to shoot through it. That‘s what competition is all about. Remind yourself that this is where you want to be; this is what all the practice is for. Nerves and anxiety are actually good things. They make you shoot better. Your mind works faster and your senses are heightened, making concentration easier. It‘s a feeling you should desire and look forward to. It‘s no different than the nerves that a skydiver feels when he jumps out of an airplane, or the feeling you get right before you get on the roller coaster, or before you kiss your date for the first time. It‘s a GOOD feeling! This attitude was best exemplified by Justin Huish when he raised his arms to pump up the crowd. He was O.K. with the feeling of pressure.

If you don‘t like the pressure, or if the feeling is too uncomfortable for you to stand, then the easy way out is to lose the match. Is that what you really want, or would you rather enjoy the feeling of competition and the WIN? If you want to be competitive, then learn to enjoy it!

Pegnois from Belgium is a perfect example of someone who comes alive during the shoot-down rounds.

6. Shoot Your Average.
The most common mistake that archers make in Olympic Round competition is trying to shoot better than they shoot. If you try to shoot a better or stronger shot than normal, you will shoot a different shot. When you shoot a different shot, your arrow goes in a different place. That doesn‘t work in archery. It doesn‘t matter whether you‘re one point behind, 2 points ahead or if you‘re in a one arrow shoot-off to win the gold. You can‘t try to shoot better when you‘re behind or relax when you‘re ahead. All you can do is shoot your same old shot. That‘s where your consistency lies. Just keep on shooting your game, one shot at a time. Anything can happen in Olympic Round competition!

7. Be prepared for anything.
A great deal of confidence comes from being prepared for anything that can happen. This means having back-up equipment that you know can hit the middle. This includes extra clothing for inclement weather that you‘ve actually shot in. You want to feel that you can deal with any situation that arises. There is no time for surprises in an Olympic Round. You know many of the things that can happen. Be

prepared to deal with them so you can focus on winning the match.

All of these mental habits can be learned and developed, just as physical skills are learned. I‘m not saying it‘s easy. Old habits are never easy to break. But these mental skills are extremely important if you want to be successful in Olympic Round competition. They can be learned, developed and mastered by practicing them. You first have to identify the mental errors that you commonly make during competition. What were you thinking that negatively affected your last match? Then you have to stop yourself when you are going mentally in the wrong direction or thinking about the wrong things. Stop these bad mental habits and get back into your game. Get back with positive self talk, and a rehearsed mental program that tells you exaxtly what to think and image. In an 18 or 12 arrow elimination round, there is no time to think the wrong thoughts. It’s all over after 12 arrows. You have to be prepared with a mental program that will get you through the match. You will enjoy the competition much more, and even win more matches. It’s a lot of fun to win!

Equipment Review - Recurve

Inside the Modern Bow Limb

By George Tekmitchov

George is a senior development engineer for Easton Technical Products and a member of the Hoyt international staff. He has been known to shoot a bow, occasionally. Any agreement between this article and the views of his employer is pure coincidence.

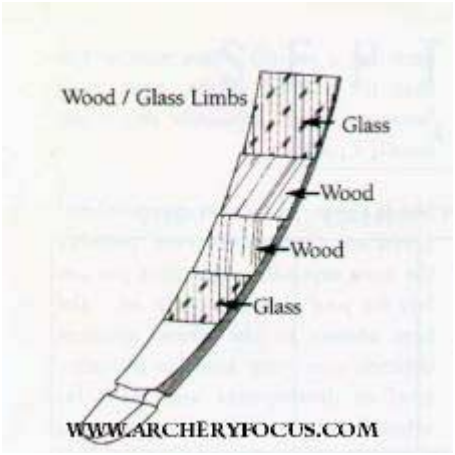
More than you wanted to know about bow limb material and production for the Olympic Bow.

A couple of issues ago, we discussed risers for the Olympic bow. The riser is perhaps the most noticeable part of the bow and arrow system, simply because it stands out due to the color, styling, and location. But, compared to limbs, risers really have a very minor role in the feel and shooting characteristics of the bow.

History of the modern bow limb, without a doubt the most popular and therefore the "winningest design" of modern times is Earl Hoyt Jr‘s original limb design, which dates to about 1956. Earl Hoyt Jr. told me the story of this limb a number of times, and the gist of the story is that it was the result of several years of painstaking trial and error, until the ideal combination of length, width, curve and geometry were found.

Limbs have the greatest effect upon the feel and performance of the Olympic bow. In modern archery, the only product with a longer track record of success is the Easton XX75 aluminum arrow shaft. This is really amazing if you think about all of the combinations of length, width and curves that have certainly been made, and the fact that the materials available today have improved. But to this day, the most popular bows sold worldwide have all of the characteristics of the original Hoyt design. These include 1.55 inches of deflex geometry on a 23" risers, and 1.7 inches of deflex on 25" risers. This same geometric design is found on HoytUSA‘s Avalon Plus, Elan and Gold Medalist, PSE‘s Universal and Zone, the Win&Win bow (Korean), Sky bow and the Yamaha Eolla and Super Feel Forged bow.

Obviously there are other limb designs out there. U.K. manufacturers such as Border, Marksman, KG and Stylist, Atletic in France, Greenhorn in Belgium and BMG in Norway have all tweaked variations of this basic geometry to put their own touch on the bow. But in these cases, the fundamental geometry is very similar. Large variations to this geometry such as radical deflex designs (STAR bow, Black Widow) or more aggressive designs (Yamaha, Alpha-E) have not stood the test of time as well as the original Earl Hoyt Jr. design.



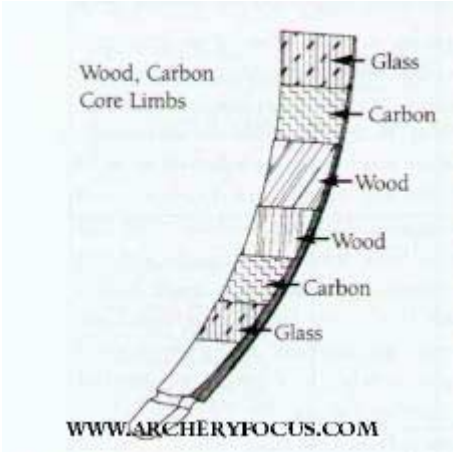
How limbs are made is still a slow, labor intensive process. Premium bow limbs use premium materials. And, unlike the compound market, there aren‘t millions of recurve limb sets sold every year to help offset costs. This is why limbs cost so much, no matter who is making them. All modern top quality limbs begin with up to 8 separate components. The innermost components of the limb are the cores. Most limb designs sandwich two of these together but there are exceptions. These are usually made of hard rock laminated maple wood, laminated bubinga wood, or syntactic foam material. The thickness of the core determines the poundage of the limbs. Thick cores make heavier poundage limbs, while thinner cores make lighter poundage limbs. It is interesting to note that the width of the limb also affects weight, but thickness affects poundage 27 times more than width.

Wood Cores

Core woods like hard rock maple are chosen for their hardness and fine grain. Wood cores are usually laminated along the length of the core to reduce the effect of natural variations in wood. They are kiln dried, because moisture can cause wood to break in cold weather.

Foam Cores

Syntactic foam is an artificial material made of a rigid composite of plastic matrix material and hollow glass "microspheres" which are perfectly sized. These glass "microspheres" are like tiny soap bubbles made of glass. When mixed with the plastic matrix the result is a hard, perfectly consistent material far superior to wood in many ways. Syntactic foam is extremely light, impervious to heat and cold, is always consistent, moisture proof and does not break down with age. Wood lacks many of these characteristics. The first Syntactic foam limbs were patented in 1985 by Earl Hoyt Jr. and Gary Filice, an accomplished archer and Easton engineer who, with Jim Easton, developed the first A/C arrow shaft, the aluminum ice hockey stick and the titanium softball bat.



The "Skins"

The next layer of material from the core outward is usually the glass "skin". This is usually a unidirectional fiberglass lamination which is strong and bonds well to the core of the limb. With medium quality limbs, this layer and the core are all there is, except maybe a layer of paint. Glass skins were first used in bow limbs by Fred Bear, Earl Hoyt Jr, and others in the early 1950‘s.

Carbon Fiber

It seems just about all top quality limbs on the market contain at least some Carbon Fiber. Carbon fiber first made a successful appearance in the Olympic Bow around 1975, when Darrell Pace was given some experimental sets to try by Earl Hoyt Jr. These first carbon limbs were fast and consistent, but prone to breakage in these early days and therefore was not released to the public. Later, a number of companies such as Hoyt and Yamaha developed more reliable carbon and wood core limbs. Today, bows use both bias-ply (set at an angle) and unidirectional (running along the length of the limb) carbon fiber for explosive power and

stability. The carbon is often on top of the glass for reasons of efficiency (best use of the material) but is sometimes under the glass for protection. Carbon is best in tension and adequate in compression.

Ceramics

This term, found on some limbs such as those made by Yamaha, refers to Boron filaments in the limb. These fibers are quite stiff and were thought to impart superior characteristics to the limbs, but over time proved to be affected more by hot weather than carbon fiber. Boron filaments are actually long crystals of boron grown on tungsten wires. Ceramics are good in compression but sometimes poor in tension.

Wedges

The riser wedges are the thick flared part, which usually connects the limb to the riser. These are made of materials such as phenolic, fiberglass and wood. The length and thickness of the wedge helps determine how and where the limb bends during the draw.

Tips

Limb tips are usually an overlay of fiberglass, sometimes of several different colors, or of resin impregnated wood, chosen for appearance. Tips used to be phenolic but the advent of Kevlar and Spectra/Dyneema strings, which can cut through phenolic over time, forced a change in this area. Sometimes phenolic is still used, but always with a glass layer in the load-bearing area.

Paint

Most target bows are light or metallic colors because these colors reflect the sun well. Often a hot limb, especially a wood core limb, will "let down" a little and lose some speed when it is hot. Light or metallic colors help prevent some of this.

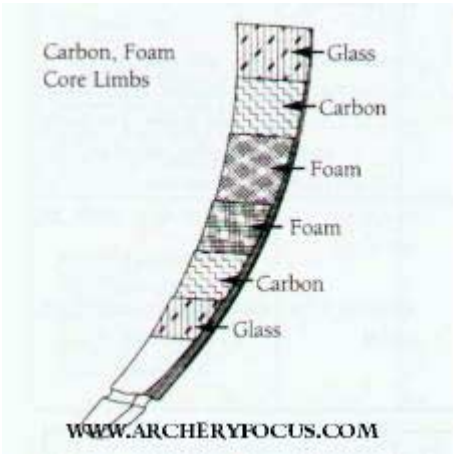
Ok, but how are they made?

These materials are assembled in what is called a "lay-up" and using epoxy, heat and pressure are shaped and cured in a mold or "bow press" (not to be confused with the worktable item in a pro shop) into the familiar recurve shape. Then the cooled "lay up", which is rectangular in plan form, is tapered and shaped by machine and finally hand into the familiar recurve limb tapering from the base toward the tip in graceful curves. Limbs are "tillered" by the removal of some material from the back of the limb. The cutting of the string notches (the correct word for these is string nocks) are often a hand operation performed by skilled craftsmen. Making a good limb is really an art form!

Some questions I hear from time to time:

What about limb tiller?

Tiller is an adjustment that is usually used to make the bottom limb a bit heavier than the top limb. This assists in aiming and makes the bow easier to shoot. Most factory limbs are already "tillered" about 1/4". This means the bottom limb has been biased to be a little heavier than the top. Consequently, the distance from a spot on the string perpendicular to the bottom limb butt is 1/4" less than the distance from a spot on the string perpendicular to the top limb butt. Tiller can sometimes change in hot weather, but this is usually not a problem.



Is a twisted limb a problem limb?

Not always! The real issue with a twisted limb is, "is it moving?" This is because a twisted limb that is stable is no different than any other limb in terms of grouping ability. However, twisted limbs need some attention to set up properly because center-shot can be hard to figure out. A pair of Beiter limb alignment blocks helps a lot in this area, because they can be used to visually "split the difference" to find true center. Of course a twisted limb that is changing from shot to shot is a real problem and needs to be fixed or replaced.

Why is my 42# limb really 43# at 28 inches?
AMO (Archery Manufacturers and Merchants Organization) standards allow up to a two-pound deviation from marked limb weight. Most manufacturers increment their limb inventory in 2# steps so it is possible to get a 42# marked limb that is actually a little more or less than the marked weight. Since most bows are weight adjustable this is not usually a problem.

Till next time, shoot straight and think ten!

Compound Tech 300

Shoot-Through Cable Systems

By Larry Wise

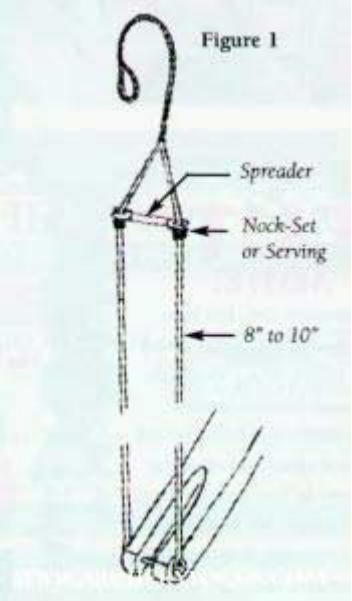
The shoot-through cable system (fig. 1) has been around for four or five years now, but has just recently gained some prominence in the target arena as a way to reduce torque in the handle. The torque in question is that generated by the lateral or sideways force placed on the cable guard by the cables. This occurs at full draw when maximum cable load is reached and has a direct effect on your ability to aim, as well as handle rotation in your grip.

The normal yoke system (fig. 2) hooks on both sides of the wheel, joins five or six inches from the wheel and then travels to the cable guard at an angle to the string. This angle is greater with the yoke system than with the old style single- hookup cable which attached only on the cable-guard side of the wheel. So the yoke system prevents axle tip and helps to align the wheels with each other but increases the torque on the cable guard. A stiff cable guard adds to the torque by keeping the cables further away from the bow‘s center line at full draw.

PURPOSE

The purpose of the shoot-through cable system is to reduce or eliminate cable guard torque by allowing the cables to run parallel to the string and totally eliminate the need for a cable guard. But, as always in archery, there are some considerations that have to be made in order to make the system functional. One consideration is the need to spread the cables 8 to 10 inches after they leave the wheel and another is the need to tune each side of the system so that both cables carry equal loads and both wheels line up in the same plane.

INSTALLATION



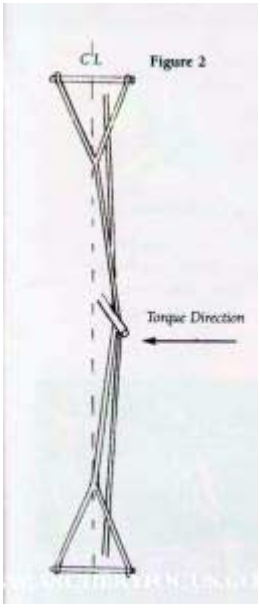
To spread the cable into two equal parts all you need is a short piece of arrow shaft with a nock on each end. I use a small ACC 3-18 with a G nock on either end. Spread the cable the same width as your axle and hook each side on the outside axle ends to allow enough separation space for arrow and fletching clearance. There are several cable spreaders on the market to do this job if you aren‘t into building things yourself. Check with Don Kudlacek Archery and Merlin Bows from England, both are producing bows with the shoot-through cable system.

In order to prevent the spreader from slipping up the cable, you must fasten it with serving or with nocksets. This may require installing an extra layer of serving over the cable so that the spreader nocks and nocksets fit tightly. Yes, this system requires a little more work but that‘s one of the trades you make to reduce torque.

After spreader installation you should check the measurements between axles. I check this distance when the bow is at rest to be sure that the distance from the bottom axle to the top axle on the left side of the bow is the same as it is on the right side of the bow. If the two distances are not the same, twist the longer cables until they are the same. Following this step you can get a little more technical about eliminating wheel tip at full draw before you start fine tuning.

FINE TUNING

To fine tune your cables you must adjust the lengths of each side of each cable. This twisting process must be done so that neither axle tips one way or another when the bow is at full draw. Having someone stand behind you and watch for wheel tip is the low tech method of checking. The high tech method involves a laser unit, sold by Spott-Hogg Archery in Oregon, placed along the one wheel. The beam should then be seen along the other wheel. If not, twist the appropriate cables until the beam lines up along both wheels.



The final tuning step is the same as always. Tune your wheel timing at long range and use the one-twist-on-one-cable method to allow the bow to tell you when its wheels are in time; it‘s in time when it‘s shooting the best groups. Twist the short end where the cable joins the wheel.

CABLE MATERIALS

I usually use BCY 450 PLUS cable material for all my cables unless I use steel wire. Some designs use a short fiber cable around the wheel to hook to the spreader device. From the spreader to the opposite axles you can use whatever you wish. Be careful not to overfill the cable groove in the wheel as a tight fitting cable may hamper performance or damage the cable.

NOCKING THE ARROW

One slight disadvantage with the shoot-through cables is how you must nock your arrow. The arrow must be fed between the cables and then the nock placed on the string. This is a little unhandy until you get used to it. It‘s worth the little extra work to be able to aim torque free. This may be a bigger disadvantage with your hunting bow

since you don‘t want to be putting the broadhead through the cables and risk cutting them; just feed the nock end back through the cables to the string.

ONE CAUTION

Since the two halves of each cable are split just after they come off the wheel, a break on one side could cause serious damage to your limbs. Keeping a close watch on them should be part of your maintenance routine. Besides, you should be doing this anyway no matter what cable system you use.

CONCLUSION

If you know someone that makes cables and strings or you can make your own, you can experiment with this cable system and reap its advantages. It does take some work however, but don’t let that stop you; remember, a turtle never gets anywhere until he sticks his neck out!

recurve tech 300

Training Schedules ...Planning for success

By Don Rabska

Don Rabska

Every serious archer should have a training schedule. Let‘s put that another way, every serious archer should have a training schedule that they follow religiously!

If you have lofty goals, you need a plan to attain them and the training schedule is a vital part of that overall plan. In fact, it should make up the largest percentage of your plan. The training schedule keeps you on track toward your goals, maintains consistency in your training and allows you the clear knowledge of where you are and what you need to work on.

Since everybody has a "life" schedule, be it school, work or family obligations, it is important to "fit" (customize) the training schedule around your life schedule to make it an integral part of your life.

Most (if not all) of the following schedule can be modified to fit around work or school schedules. As long as the training is completed for each day, it is not too important what time of day (or night) you complete each segment. There are a few exceptions however, example: don‘t plan to shoot directly after weight lifting. Your muscles will not have recovered enough to allow you to perform your "standard shot", and could actually inhibit your technique and lead to bad habits. Following is a list of components that make up the training schedule:

Mental

Mental training can be done almost anytime, but there should be specific times set aside when you can fully focus on your mental practice. Zen, visual imagery, affirmation review and progressive relaxation are very good mental practices that should be incorporated in your schedule. Obviously, there are many more mental training techniques and information available beyond the four listed, and you can supplement your own system for any noted above. I recommend doing the Zen portion early in the morning to help prepare your mind for the days events. Focus on your breathing from the diaphragm, as if you had a tube running from your nose to your stomach. Breath in and out through the nose, but your out breath should be three times longer than your in breath. This technique will help you focus your mind in "present time", an important technique for competition.

Physical Training (cardiovascular and strength)

Cardiovascular training may include, running, bicycling (actual or stationary) swimming, rope jumping, power walking etc.

Serious competition requires serious training

Weight training should be considered in two parts for "off season" and during the competition season. Incorporate the two cycles of weight training into your year-round training schedule. In the off season, work more on strength training. During the competition season, work on maintaining good conditioning and endurance training, i.e. 15 to 20 reps with lighter weights than you use for strength training. Also, it is highly recommended to stop lifting at least 4 days prior to a competition. This break will allow the muscles to recover from weight training (and reduce muscle soreness) for maximum strength at your level of conditioning.

Technique training without shooting

These exercises should be done at night prior to bed time. I recommend alternating days (as indicated on the following schedule) between the long drawing times and drawing practice. The long draw times are designed to build strength, endurance and control, while the "drawing practice" is for building accuracy and consistency. Following is a brief description of these training techniques.

• *Long drawing times.* Draw the bow to full draw for 20 to 60 seconds while working on maintaining relaxation and fine motion. When at anchor, try to control your scapula motion very slowly so you do not go static, but do not draw more than 1/2" past your normal anchor. Do this 10 times before going to bed, resting 1 minute between each draw.

• *Drawing practice.* This is an important exercise for working on body position, consistent anchor position, drawing control and accuracy. Do this in front of a mirror part of the time to monitor your shoulder positions, body angle, i.e. standing up straight, and your alignment by facing the mirror. Do this about 30 times before going to bed.

Drawing practice should also include work on body stability. This would include your breathing control routine (from the diaphragm), focusing stomach tension and practice toward relaxing the rest of your body while drawing the bow.

Denise Parker

Shooting

The actual shooting part of your training should include many parts, such as close distance (5 to 10 meters) from the target matt and long distance shooting at a blank target. Practice on a matt with no target or on a target turned backward, i.e. an all white face. It is interesting to shoot a distance score on a new face turned backward. Then turn it around and score, you may be surprised with the result. This is very good practice for focusing on the center and narrowing your focus to a fine point, rather than shooting at the entire target or even the entire gold. Remember, there is another ring inside the gold and you need to give your subconscious a clear message to hit the center not just a color.

Your other shooting practice should include, free practice (not scoring), scoring at all distances, wind shooting training and aim off practice, special training techniques (double draw, ForMaster, eyes closed etc.), working with your coach and writing in your training log.

In preparation for competition, you need to develop the schedule that works best for you. Some top archers start to taper off the number of arrows they shoot 7 to 10 days before the event. For example, if you are shooting 300 arrows per day, start to taper off to 280, then 250, 220, 190, 170, 150 and shoot only 60 to 80 shots the day before competition. Learn what works for you.

Equipment tuning, testing and maintenance

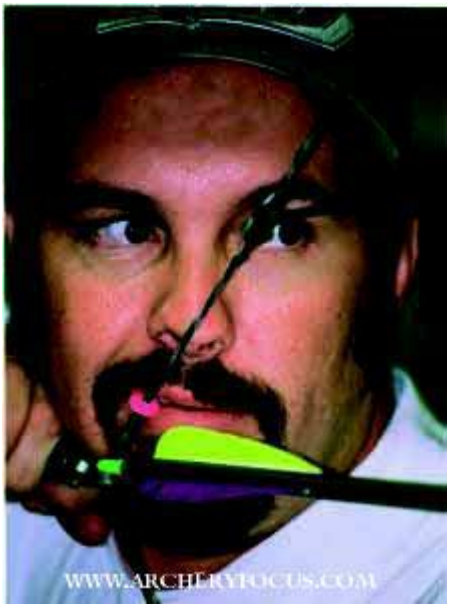
Set aside time to work on your equipment in preparation for upcoming competitions. Tasks like string making, arrow fletching and repair, button maintenance etc. can be done in the evening. You will also want time during your regular shooting for testing new equipment. Do this during both free practice, for tuning in the equipment and then tested during a scoring session to determine any improvement. If you are satisfied with the new item/s, then test it in a small competition before going into an important event. You want to build confidence that the new goodies will work well under tournament stress. Prepare and test your back-up equipment as well before going to any major tournament.

Until next time, Good Shooting!

Equipment Review - Compound

Timberline Archery's "NO-PEEP"

By Drew Wilcox



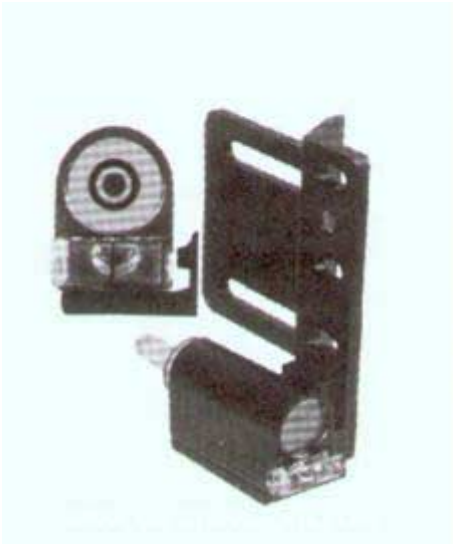
Drew Wilcox

When I first saw this little gadget, I was sure that I was looking at another one of those over thought, unreliable trinkets that seem to swarm over our sport and prey upon our unsuspecting participants like coyotes toying with a field mouse. Fortunately for me, I refuse to let myself get stuck in the rut of traditional "this is the way it has always been, and always should be" style of thinking. After all, if we never tried new things, we'd all still be living in caves and eating raw meat.

The NO-PEEP from TIMBERLINE ARCHERY PRODUCTS is a peep-less sight alignment system that employs fiber optic technology to triangulate the arrows trajectory in relation to the archer's anchor, aiming point and target. The NO-PEEP was surprisingly easy to install and set-up, and after 2 months of shooting this device, I can safely say that TIMBERLINE has built a great product that works.

The theory behind the NO-PEEP is simple, center the dot inside the circle in the view area, put your pin on the target, and there you go. The unit is a breeze to master; I found that I was able to become proficient with the No-PEEP in just a matter of a few ends.

Bowhunters and 3-D shooters alike, will enjoy the benefits of the NO-PEEP. Removing the obstruction of the traditional string peep, greatly increases the archer's view of the target or animal. The light gathering capability of the NO-PEEP is outstanding. In low light conditions with a conventional peep system, most archers are unable to achieve a good sight picture due to what I refer to as the "tunnel" effect. With the NO-PEEP, even in less than minimal lighting, I was looking at a crystal clear sight image that made me thirsty for those just after dawn, just before dark hunting encounters.



Timberline's "Peep Sight Eliminator"

Another great application for the NO-PEEP is as a training tool. Archers of all types who have been plagued by problems with hand torque and inconsistent head positioning, will be able to employ the NO-PEEP as a speedy, reliable aid to treating their ailments. Any change in consistency or unwanted pressure from the bow hand reveals itself instantly in the NO-PEEP's view area. Believe me, if you think you have consistent form, wait until you try this great tool - it will really help your form and potentially could aid you in your journey to the next level.

I‘d like to close by thanking TIMBERLINE ARCHERY PRODUCTS for not being afraid of trying something different, and neither should we.

See’ya on the shooting line.

Releases

Fletch Hunter - Jim Fletcher Archery

Jim Fletcher Archery Aids Incorporated's Fletchunter
The Fletchunter model is one of our most popular models of releases. The Fletchunter style is a clip-on type release that fastens directly to the bowstring, yet is still easy on the serving. The Fletchunter is favored by hunters, but also works as a first rate target release. Fletchunter features our patented, over-center linkage system that is infinitely adjustable, from hair to heavy trigger. It is available in hunter black anodize.

For more information :
Jim Fletcher Archery Aids, Inc.,
P.O. Box 218,
Bodfish, CA 93205
(760)379-2589

Golden Key's Hide-Away Caliper Release
The new patent pending, Hide-Away, is a top quality, smooth shooting Caliper Release Aid that features a precision adjustable head that gives the archer a fast, clean, accurate release of the string. The nice feature is that the release head and shaft are designed to retract into the comfortable wrist strap. No need to remove the strap or fight with a release that is just in the way when doing something other than shooting. When you are ready to shoot again, the head may be pulled back into shooting position.

For more information:
Golden Key-Futura, Inc.,
P.O. Box 1446,
Montrose, CO 81402-1446,
(970) 249-6700 Phone
(970) 249-4108 Fax.

Caliper Release - Golden Key

Lockjaw - Carter Enterprises

(208) 624-3467 Phone
(208) 624-7515 Fax

Carter‘s Lockjaw
The Lockjaw release aid from Carter Enterprises is one of the hottest new archery products of 1998. Designed for precision shooting in the field and on the 3-D range, the Lockjaw is an alternative to the caliper. Its reverse closed jaw design allows you to line up your pins straight with your arrow shaft for optimum arrow flight.

For more information:
Carter Enterprises,
108 West 1st North,
P.O. Box 19,
St. Anthony, ID, 83445,

The Rhino Release from Scott Archery
The Rhino is the first mechanical release aid designed specifically for use with string release loops which have become increasingly popular to eliminate critical pinching and string twisting - particularly on short axle-to-axle speed bows. The fully adjustable Rhino features a rotating pivot block and is available in several anodized colors. The Rhino is also available in all strap styles or grip.

For more information:
Scott Archery Manufacturing, Inc.,
101 Tug Branch Rd.,
Clay City, KY 40312,
(606) 663-2734, Phone
(606) 663-4615 Fax

Rhino Release - Scott Archery