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2010

Head-2-Head Blind Bow Test

Produced and Sponsored by

Bowsite.com



Performed by Jon Silks

Silks Outdoors

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2010 H2H INTRO

Welcome to the 2010 Head2Head Bow Test. This is our 8th year running this test on Bowsite.Com! Our test was the first Head-2-Head test of its kind and is still the only test that employs the aid of a blindfold. While there are others that have jumped on the “multiple bow test” bandwagon our test is set apart through our methods and integrity. Our rules and methods are not compromised and each bow company is placed on the same playing field as all the others. This is a no-nonsense bow-to-bow evaluation of the archery world’s top rigs.

The ranking method has been through some changes over the years. We started out with a bracketed tournament type test that we tied into the March Madness tournaments and then moved into a complete 1st to last true stacking in the last few years. I think the true ranking method is the best and will stick to it. I will not, however, publish all the rankings from 1 through 6. You will only see the top three for each category (except speed) and the top three overall for subjective and composite. This is done to protect the companies and individuals that are represented by a bow that finds itself toward the bottom of the rankings. Consider things from the manufacturer’s point of view. Nobody wants to bust their tail creating a bow and then have it come in 6th place out of 6 bows. In past years I tried to explain to you, the reader, and to the manufacturers that last place isn’t a bad thing when you consider these are probably the best bows in the business. There is a good chance that our number 6 bow would still be number 6 if even if we tested 30 bows – then 6th wouldn’t seem too bad, would it? I struggled with the best way to balance disclosure, useful information and compassion and in the end I decided that it would be better for everyone if only the top three are posted. These are all quality bows worthy of a first-hand look should you be in the market for a new rig.

In 2010 we will continue the tradition started in 2009 - You will see a completed force draw curve and associated information such as kinetic energy, dynamic efficiency, etc for each bow. In recent years I have worked with two skilled engineers to produce a force draw system with integrated software package – the Silks Outdoors Bow Analysis Program.

What you will see this year:

- Pictures of each bow
- Specs for each bow
- Silks Outdoors Bow Analysis Program
- My personal commentary on each bow
- Individual category results
 - Draw cycle
 - Balance/feel
 - Shock/vibration
 - Shot noise
 - Speed
- Two overall results
 - Overall subjective (4 subjective categories combined)
 - Overall subjective plus speed



H2H Prologue

It's a new year and that brings a new change for our annual Head2Head Bow Test. For the first time we have split bows into two categories – **speed bows** and **shooter's bows**. For that reason we changed how you voted for your bows of choice this year.

A thread/post is started here on the Bowsite's national forum in which everyone is encouraged to register their single vote for a bow they want to see entered into the test. Actually, this year we asked for two votes – one for a bow 335 fps IBO or over and one for a bow under 335 fps IBO (Based on the manufacturer's lowest advertised IBO rating). Only one vote per archer per category was accepted (as far as we know anyway) and only one bow per manufacturer was permitted entry into the test for each category. Bows from the same family of companies were permitted entry. For example we would accept a Bowtech and Diamond bow into the test. They are two different companies with one common parent – Savage.

The most votes came in for the following rigs:

SHOOTER'S BOWS

- Hoyt Maxxis 31
- Elite Z28
- Bear Attack
- Athens Accomplice
- Mathews Z7
- My wild card = PSE Vendetta

SPEED BOWS

- Hoyt AlphaBurner
- Elite Judge
- Mathews Monster 7
- Rytera Alien Nemesis
- Bowtech Destroyer
- My wild card = PSE Axe 6

The whole idea behind the H2H is to, as best we know how; evaluate the **SUBJECTIVE** qualities of a number of bows – head to head. Many archers select a bow based on subjective traits such as the kick/vibration at the shot, how smooth it is on the draw, etc. A bow that is easy to draw, quiet, and generally shock free at the shot will many times win out over one that displays harsher characteristics. There is also one **OBJECTIVE** factor that seems to come into play fairly often for those selecting their next bow – speed. For that reason we tested speed of each bow and used the results as part of our overall results.



The validity of the H2H subjective results lies squarely on the method of testing – blindfolded archers evaluating bows without regard to brand or looks. We follow a strict rule in keeping the identity of the bows hidden until an evaluator had completed the entire test. They do not see the bows prior to or during the test. While testing some of the testers will offer their guess as to which bow they are holding. Are they ever correct – sure, sometimes. More often than not, in fact approximately 95% of the time, they are dead wrong. This year we had a couple of guys swear they were testing a bow that wasn't even in the test! I get a particularly good laugh out of the gentlemen that are adamant about their guess and are shocked when they find out they had absolutely no clue. Understand, these bows are being shuffled in and out of the tester's hands very quickly and from their perspective it is pitch black under the blindfold. The bottom line is that the blindfolded bow test accomplished the goal of keeping brand knowledge and therefore brand loyalty at bay.

Although I will include my personal opinion about the bows in their individual write-ups the results are based solely on the eight evaluators and their selections in each category.

Jon E. Silks

Silks Outdoors

Silksoutdoors.com



Voting and Test Procedures

Choosing the ten bows (two categories – 5 bows each) for the Head2Head Bow Test is done through a voting process right here on **BOWSITE.COM**. This year we asked for two votes from each Bowsiter – One vote for a bow that has an advertised IBO speed of at least 335 fps and one vote for a bow under 335 fps IBO. I used the manufacturer's lowest advertised IBO speed to place them into one of the two categories. For instance the Bear Attack has an IBO range that spans both categories, however, I placed it in the Shooter's Bows category because its lowest IBO number fell below 335 fps.

The poll was conducted in the same manner as last year – that is, voters not only chose the manufacturer but they also chose the model to be tested. Here is the official voting thread posted on February 6th of this year:

We rely completely on the Bowsite for our votes and eventual test bow lineup. Once the bows are selected for each category I add an additional bow as my "Wild card". The first year I picked a wildcard (Bear Instinct) it ended up placing very well and only retailed for approximately \$399.00!

Subjective tests were conducted with each bow set to a 28" draw length and 65 pound draw weight. Why 28/65? Several reasons. First, a 28" draw length is more common than a 30" draw length according to many manufacturers polled on the subject. Second, finding a tester with a 28" draw length is much easier than finding one with a 30" draw length. The 65-pound draw weight is also very common with today's hunters and is easier to handle through the entire test.

Each evaluator worked separately through all four categories. A blindfold was used to keep brand loyalty at bay and was worn from the beginning to the end of each session (draw cycle, balance & feel, etc.). Evaluators were not permitted to see the bows until after they were done with their evaluation. Following is an example of how the testing was performed:

Example of the "draw cycle" category process:

- The evaluator is blindfolded.
- He is handed a bow to draw.
- The bow is handed back to the helper and the evaluator is given a second bow to draw.
- The evaluator chooses between the two.
- The one that is not chosen as "best" between the two is put through the same process with the next bow in line.
- Both are drawn and one is chosen.
- Again, the one that is chosen is put up against the next bow in line.

This process is continued until only a single bow remains. The bow that remains is the evaluator's #1 pick for that category. That bow is then taken out of the testing. The entire process is completed again for the remaining bows until only one remains, which becomes the evaluator's #2 overall pick for that category. This process is repeated until all bows have been placed/ranked.



Each evaluator's results are then scored. This was done by simply inverting the numbers of the rankings and rewarding points for each ranking. For example:

1. Evaluator's #1 Pick
2. Evaluator's #2 Pick
3. Evaluator's #3 Pick
4. Evaluator's #4 Pick
5. Evaluator's #5 Pick
6. Evaluator's #6 Pick

The bows would then be given the following scores for one evaluator for the draw category:

1. #1 Pick – 6 points
2. #2 Pick – 5 points
3. #3 Pick – 4 points
4. #4 Pick – 3 points
5. #5 Pick – 2 points
6. #6 Pick – 1 point

The points are totaled for all evaluators in each category. The bow with the highest number of total points in that category is rated #1 and so on down the line to #6. In this way we are able to get a true ranking for each category based on the results from all evaluators.

Speed is tested in the following manner (28/65 with 350 and 425 grain arrows):

- Just to make sure the bow is at least in the right ballpark the draw weight and draw length are roughly verified with Easton's Hand Held Bow Weight Scale and a simple draw length arrow correlated to a mark on the shelf equaling the deepest part of the grip. This saves me a lot of time if the bow is not close to the right draw length or draw weight.
- Brace height is tested using calibrated dial calipers
- Verify draw weight using a calibrated digital force gauge
- Verify draw length using my Silks Outdoors Bow Analysis Program, which is a combination of a custom software package, modified Apple Bow Drawing Machine, Chatillon force gauge, calibrated 36" steel rule and trammel point
- Mark cams at full draw
- Install New Archery Products Quik Tune 3000 Arrow Rest
- Set nock point



- Set bow on Spot Hogg's Hooter Shooter portable shooting machine – draw to cam marks and fire through two chronographs – Pro Chrono and Easton. Both chronographs are equipped with indoor lighting kits.
- Speed is recorded from the mean of both chronographs over 5 shots – see the velocity stats graphs.

***As a side note:** I also tested all of the bows by hand. Same basic procedure as above except I shot the bow by hand through both chronographs rather than using the Hooter Shooter. I am not sure if it because of the placement of the arrow through the screens or that I draw further than the marks on the cams but my hand drawn numbers were always a couple of feet per second faster on average than those from the Hooter Shooter. I also ran my hand drawn numbers through the same statistical program as the Hooter Shooter numbers and found that statistically speaking my hand shooting is as consistent as the Hooter Shooter. Still, I only used the Hooter Shooter numbers for the results.

In the event that a bow that does not meet the draw length spec, either short or long, I will contact the manufacturer and get a module that brings them into spec or just get another bow altogether. **Strings and cables are not tweaked to bring a bow into spec unless the manufacturer asks me to do so.** The same goes for a bow that has “out of tune” cams– a term that is commonly used in referencing the timing, synchronization, etc of the bow's eccentric system.

I also want the readers to understand where I stand as a writer in hopes that it will eliminate or at least minimize the absurd speculations that seem to pop up every year when the H2H is posted. According to some I am somehow biased to one company or another and some folks have gone as far as accusing me of being bought-off by a certain manufacturer (usually the one that won that year). Let me introduce you to reality – the archery world does not spin that way – at least not for me. I do not have any manufacturers courting me in any way and none have offered to pay me to make them look better. It simply does not happen.



Disclaimers

Although the information found on this report is believed to be accurate and reliable, no warranty, expressed or implied, is made regarding the accuracy, adequacy, completeness, legality, reliability, or usefulness of any information, either isolated or in the aggregate.

While Bowsite.com is sponsored by some of the bow companies evaluated, no testing or commentary was performed by Bowsite.com. All testing and commentary is done by Silks Outdoors and independent of the site or anyone affiliated with them. Bowsite has no communication, nor do they see the results until they are completed and handed in at the conclusion of testing. Bowsite.com has maintained a strict, 'Hands off' policy regarding the H2H testing since its inception.

Maintaining the integrity of this test is what has made it so popular over the past several years. This is the top priority for both Silks Outdoors and Bowsite.com.

2010 H2H Evaluation Team

I cannot adequately express my gratitude for those that volunteer their time and hard work to make the H2H possible! This test takes many hours and a ton of effort on everyone's part. This year we further changed the testing format to make it easier on the evaluators. In years past we would basically do the entire test in one session – a many hours long grueling task. Two years ago we split the test up into 2 separate sessions making it much easier on the evaluators but still fairly significant in length. Last year we further divided things up by having only one archer per session. This year we not only spread archers out over time but we also provided two testing locations – my shop in Spring Mills, PA and Weaver's Archery in Middleburg, PA. Things are getting much better year-by-year.

To all those listed below – **THANK YOU!**

- **Bryan Fultz –**
 - Age: 40
 - Years of archery experience: 22
 - Animals hunted: whitetail, elk, mule deer, bear and turkey
 - States hunted: PA, CO, WA, IL
- **Todd Jodon -**
 - Age: 40
 - Years of archery experience: 34
 - Animals hunted: whitetail, elk, mule deer, boar, turkey and bear
 - States hunted: PA, OH, CO, WA, VA, WV, SC
- **Justin Wendorf –**
 - Age: 29
 - Years of archery experience: 22
 - Animals hunted: whitetail, turkey
 - States hunted: PA
- **Tyler Silks –**
 - Age: 18
 - Years of archery experience: 13
 - Animals hunted: whitetail, turkey
 - States hunted: PA, OH
- **Randy Stahl –**
 - Age: 31
 - Years of archery experience: 10
 - Animals hunted: whitetail deer, fallow deer, turkey, hogs, coyotes
 - States hunted: PA
- **Cody Hockenbrock –**
 - Age: 16
 - Years of archery experience: 2
 - Animals hunted: black bear, whitetail, turkey
 - States hunted: PA



- **Joel Kauffman –**
 - Age: 20
 - Years of archery experience: 6
 - Animals hunted: whitetail, turkey
 - States hunted: PA
- **Brandon Stacey –**
 - Age: 34
 - Years of archery experience: 16
 - Animals hunted: whitetail, turkey, black bear
 - States hunted: PA, MD, WV
- **Shaun Knepp –**
 - Age: 32
 - Years of archery experience: 20
 - Animals hunted: whitetail, turkey, black bear
 - States hunted: PA, OH, IL
- **Keith Weaver –**
 - Age: 29
 - Years of archery experience: 20
 - Animals hunted: whitetail, turkey, black bear
 - States hunted: PA, NY, ME
- **George Hummel –**
 - Age: 32
 - Years of archery experience: 20
 - Animals hunted: whitetail, black bear, turkey, elk, moose and caribou
 - States hunted: PA, IL, CO, ID, MT, Quebec
- **Tom Glass –**
 - Age: 46
 - Years of archery experience: 22
 - Animals hunted: whitetail, turkey
 - States hunted: PA

2009 H2H Support Team:

This test takes an incredible amount of time and hard work on the part of many participants. I rely heavily on my 14-year-old son Michael. He knows the test procedures well and is always there to help. My 11-year-old daughter Erin and 8-year-old son Caleb also helped out this year.





Special Thanks

A very special **thank-you** is in order for these sponsors and friends!!

Weaver's Archery (<http://www.weaversarchery.net>) – A special thanks to Keith Yoder and his family for allowing us to perform a portion of the blindfold testing at his indoor shooting lanes. Keith has a fantastic facility and you won't find a nicer family!!

Osborn Archery (<http://www.osbornsportshop.com/stringloop.htm>) for providing all of the Firecracker string loops – These are the best loops I have used!

Bowtech Archery (<http://www.bowtecharchery.com>) for providing the **Hostage Pro** Arrow Rests used during the subjective portion of the H2H. These rests are perfect for this test!

Easton Archery (<http://www.eastonarchery.com>) for providing their Bow Force Mapper System, Chronograph, Grain Scales and arrows. Easton is a class organization with top-notch people running the show. I now use Easton exclusively for all of my arrow needs.

New Archery Products (<http://www.newarchery.com>) for providing QuikTune 3000 Arrow Rests for speed testing! No matter what the riser configuration I know that my 3000s are up to the task.

American Whitetail Targets (<http://www.archerytargets.com>) for providing the huge bag targets necessary for blindfolded archers!!!



And of course, all of the **manufacturers** who provided the bows for testing!!!



SUBJECTIVE RESULTS

Subjective Categories

Balance/Feel

Noise Level

Kick / Vibration

Draw Cycle



Balance/Feel:

The manner in which the grip of a bow naturally positions your hand and wrist is an important factor in attaining accuracy. Also, the feel of a bow in your hands can seriously affect your decision to buy one rig over another. A bow that meets your needs in some areas but feels like a block in your hand will likely be left on the shelf.

Speed Bows	
Mfr	Score
1. Mathews Monster 7.0	34
2. PSE Axe 6	32
3. Hoyt Alpha Burner	29

Smooth Bows	
Mfr	Score
1. PSE Vendetta	36
2. Elite Z28	32
3. Hoyt Maxxis	28

Noise Level:

One of the most sought after hunting bow characteristics is a low level of noise generated at the release. It has become a market obsession and the manufacturers have responded with parallel limbs, vibration dampening accessories of every sort and various machining features. Hunting rigs today are far quieter right out of the box than bows that were fully loaded (stabilizers, Limb Savers, etc) five to 10 years ago.

Speed Bows	
Mfr	Score
1. Bowtech Destroyer	38
2. Hoyt Alpha Burner	28
3. Mathews Monster 7.0	27

Smooth Bows	
Mfr	Score
1. Mathews Z7	40
2. PSE Vendetta	30
2. Bear Attack	30

For this portion of the evaluation each tester was asked to sit in a different location and orientation related to the shooter's position. They were either blindfolded or their backs were turned to hide the identity of the bows.

Kick/Vibration:

If you were into the archery scene back in the 90s you will probably remember what I like to call the Mathews Jaw Drop – the expression on people's face when they first shot the MQ1, which had extremely low shock and vibration levels at the shot.

That bow started it all and now bow manufacturers have become experts at killing vibration and kick.

Speed Bows	
Mfr	Score
1. Bowtech Destroyer	40
2. Rytera Alien Nemesis	30
3. Mathews Monster 7.0	27

Smooth Bows	
Mfr	Score
1. Mathews Z7	36
2. Hoyt Maxxis	35
3. Elite Z28	30

A special challenge exists with this category in that the evaluator has to concentrate extremely hard to separate the noise heard in their ears with the sensation felt in their hands. Many times when a bow produces a significant level of noise we mentally transfer that sound to our perception of the shock and vibration. The two do not always go hand in hand however. To help reduce the effects of this phenomenon the evaluators were asked to wear earplugs during the test.

Draw Cycle:

The draw cycle of a bow plays a major role in our perceived enjoyment of shooting. It also keeps us going back to the practice range more often if we like shooting a particular bow. Since the draw cycle is independent of the grip I had each tester wear a glove on his bow hand to further protect the identity of the bows.

Speed Bows	
Mfr	Score
1. Mathews Monster 7.0	33
2. PSE Axe 6	32
3. Hoyt Alpha Burner	27

Smooth Bows	
Mfr	Score
1. PSE Vendetta	37
2. Elite Z28	36
3. Athens Accomplice	26

SPEED RESULTS

28" draw length / 65 pound draw weight / 350 grain arrow

Speed Bows

Make	Advertised IBO	Average Speed Results	Score	Rank
Bowtech Destroyer 350	342-350	309.82	42	1
Hoyt AlphaBurner	340	308.62	35	2
PSE Axe 6	337-345	302.62	28	3
Elite Judge	343-347	301.80	21	4
Mathews Monster 7	342	300.55	14	5
Rytera Alien Nemesis	335	293.07	7	6

Smooth Bows

Make	Advertised IBO	Average Speed Results	Score	Rank
Bear Attack	332-340	294.4	42	1
Hoyt Maxxis	323	293.86	35	2
Mathews Z7	332	293.13	28	3
Athens Accomplice	330	293.13	28	3
PSE Vendetta	320-328	288.92	14	5
Elite Z28	316-320	278.3	7	6

FINAL RESULTS

The results of the 2010 H2H Blind Bow Test are:

Speed Bows

SUBJECTIVE ONLY SCORES/PLACE

Mfr	Model	Score	Rank
Mathews	Monster 7	122	1
Bowtech	Destroyer	120	2
Hoyt	AlphaBurner	99	3

SPEED + SUBJECTIVE SCORE/PLACE

Mfr	Model	Score	Rank
Bowtech	Destroyer	162	1
Mathews	Monster 7	136	2
Hoyt	AlphaBurner	134	3

Smooth Bows

SUBJECTIVE ONLY SCORES/PLACE

Mfr	Model	Score	Rank
Mathews	Z 7	118	1
PSE	Vendetta	112	2
Elite	Z28	109	3

SPEED + SUBJECTIVE SCORE/PLACE

Mfr	Model	Score	Rank
Mathews	Z7	146	1
Hoyt	Maxxis	136	2
Bear	Attack	127	3

2010 Bow Evaluation Commentary

Jon Silks' Personal Bow Commentary

Athens Accomplice

The Accomplice shines in the draw cycle category. It is fairly smooth from start to finish. Unfortunately it did not hit the top three in the other categories. A grip that forces your hand up under the shelf and a couple of pressure points hold the bow back in the feel/balance category while notable kick and vibration levels kept it sub top 3. Still the Accomplice is a good bow and a good start for this fledgling company.

SPECS

- Eccentric System: Two track EV2 Dual Cams
- Draw lengths: 27 - 30 inches in ½ inch increments
- Letoff: 65 to 80%, adjustable
- String: Winner's Choice, 8125, 54-1/4"
- Cables: Winner's Choice, 8125, 35-7/8"
- Riser: Reflex, CNC machined aluminum
- Finish: Next G1, Black
- Grip: Two-piece laminated
- Cable Guard: Carbon rod
- Limbs: Barnsdale Laminated
- Draw weights: 50, 60, 70 and 80# peak
- Brace Height: 7 inches
- Axle-to-axle length: 32 inches
- Mass Weight: 3.95 pounds
- Advertised IBO speed: 330 fps
- Suggested Retail Price: \$749
- Warranty: Lifetime excluding strings and cables

My notes:

- Smooth draw throughout
- Grip ok, not great under shelf
- Significant kick and vibration
- Notable shot noise
- Looks good
- Good weight – not too heavy
- Ok balance



Elite Z28

The Elite Z28 has a super smooth draw and one of my favorite grips. It demonstrates excellent shooting characteristics with minimal shock or vibration. It does however have a louder shot than some of the others. All in all it was one of my favorite of the test just because it is fun to shoot.

SPECS

- Eccentric System: Two Track Binary Z Cam
- Draw lengths: 27 - 30 inches in ½ inch increments, modular
- Letoff: 80%
- String: 452X, 56-1/4"
- Cables: 452X, 36-7/8"
- Riser: Reflex, Forged and CNC machined aluminum
- Finish: Realtree AP, Realtree MAX-1, Black, Anthracite Metallic
- Grip: 2-piece laminated wood
- Cable Guard: Carbon rod
- Limbs: 5- Layer Laminated
- Draw weights: 60 - 90# in 10# increments
- Brace Height: 7-3/4 inches
- Axle-to-axle length: 32-1/4 inches
- Mass Weight: 3.9 pounds
- Advertised IBO speed: 316-320 fps
- Suggested Retail Price: \$869.99
- Warranty: Limited Lifetime and Hunt Guarantee

My notes:

- Exceptionally smooth draw
- Not much kick – small “bump”
- A little louder than others
- Almost no vibration
- Light weight
- Love the Elite grips
- Like the black finish
- Pleasant shooting experience



Mathews Z7

Mathews seems to find a way to get it done year after year and the Z7 has proven it is up to the challenge. I knew the Z7 was doing well during the testing, however, I had no idea it would come out in the scores the way it did. It did not make the top three in balance/feel or draw cycle; however, it took the number 1 spot in shot noise and shock/vibration. The Z7 is a performer.

SPECS

- Eccentric System: Z7 Solocam
- Draw lengths: 25-30 inches in ½ inch increments
- Letoff: 80%
- String: Zebra Barracuda, 86-7/8"
- Cables: Zebra Barracuda, 32-1/2"
- Riser: Grid Lock, reflex, CNC machined aluminum
- Finish: Black Matte, Lost Camo
- Grip: SlimFit Inline, Laminated Walnut
- Cable Guard: Reverse Assist Roller Guard
- Limbs: SE4 Composite Slim Limb
- Draw weights: 30-40, 40-50, 50-60, 55-65, 60-70
- Brace Height: 7 inches
- Axle-to-axle length: 30"
- Mass Weight: 3.97 pounds
- Advertised IBO speed: Up to 332 fps
- Suggested Retail Price: \$899
- Warranty: Limited Lifetime

My notes:

- No detectable vibration
- Very quiet
- Almost no kick – very small and short lived “bump”
- Grip right there with the Elite grip
- Good balance
- Little heavy
- Good draw cycle
- Loaded



Hoyt Maxxis 31

Hoyt's Maxxis 31 had a fairly good showing in this year's test. The draw cycle, while fairly smooth, did not score well because many folks did not like the ultra short valley. It was a very close second to the Z7 in shock and vibration – one point! It scored well with its comfortable grip and had good shot noise numbers. It did better than expected in the speed category and ultimately hit number 2 when speed was factored in.

SPECS

- Eccentric System: XTR Cam and ½
- Draw lengths: 23.5 - 30 inches in ½ inch increments
- Letoff: 75%
- String: Fuse
- Cables: Fuse
- Riser: TEC Riser, Reflex, CNC machined aluminum
- Finish: Hunting - Realtree APG, Black Out, Half & Half (Black Out riser with APG limbs); Target anodize – Blue Fusion, Red Fusion, Orange, Cobalt Blue and Jet Black. Pearl White Paint.
- Grip: 180 Pro Fit, one-piece thermo plastic elastomer
- Cable Guard: In Line Roller Guard
- Limbs: 5-layer laminate
- Draw weights: 50 - 90# peak
- Brace Height: 7 inches
- Axle-to-axle length: 31"
- Mass Weight: 3.9 pounds
- Advertised IBO speed: 323 fps
- Suggested Retail Price: \$899
- Warranty: Limited Lifetime

My notes:

- Compact
- Quiet
- Smooth draw but no valley
- Handles very well
- Quick jump and very little vibration
- Comfy grip
- Light weight



PSE Vendetta

The draw cycle on this bow is so smooth that it caused me to go back and check the draw weight for accuracy. Considering the relatively long axle-to-axle length it is a lightweight bow. This bow did very well in every subjective category except shock and vibration where it was held back by a significant kick and lasting vibration.

SPECS

- Eccentric System: L6 hybrid cam system-smooth draw with plenty of adjustability and performance.
- Draw lengths: XL- 26 ½" to 32 ½". XS-24 ½" to 30 ½". Both in ½" increments without needing a bowpress.
- Letoff: 75%
- String: BCY Formula 8125. XL-65", XS-59 3/8"
- Cable (s): BCY 450 Plus. XL-36 ¾" buss/42 1/8" control. XS-31 1/8" buss/36 ½" control.
- Riser: Machined aluminum.
- Finish: Mossy Oak Treestand, Skullz, and Satin Black
- Grip: Slim, Low Torque (SLT) grip
- Cable Guard: Cam Lock Adjustable
- Limbs: 12" massively preloaded split limbs
- Draw weights: XL-60# and 70# peak. XS-50#, 60# and 70# peak.
- Brace Height: XL-7 ¼". XS-6 ½".
- Axle-to-axle length: XL-35". XS-29 ½".
- Mass Weight: XL-4.1 lbs. XS-3.8 lbs.
- Advertised IBO speed: XL-328-320 fps. XS-330-322 fps.
- Suggested Retail Price: XL-\$679.99 MSRP. XS-\$599.99 MSRP.
- Warranty: Limited Lifetime Warranty

My notes:

- Very smooth
- Significant jump and vibration
- Very well balanced – solid on the target
- Quiet
- Light weight for length
- Versatile cam
- Top 3 Contender



Bear Attack

Bear's new Attack was one of the quietest of the test, which is made even more significant by the fact that it was also the fastest bow in the Shooter's Bow category. A grip that is too deep (front to back) landed it low in the feel/balance category and a bumpy draw cycle also held it back in that category. The Attack did not make the top three in the shock and vibration category, however, it was knocking on the door and for good reason – it does not have much of either.

SPECS

- Eccentric System: Single E-Cam
- Draw lengths: 25 - 30 inches in ½ inch increments, modular
- Letoff: 80%
- String: Pre Stretched Contra-Band HP, 92-1/2"
- Cables: Pre Stretched Contra-Band HP, 32-11/16"
- Riser: Reflex, aluminum
- Finish: Realtree APG and Shadow Series
- Grip: One-piece slim synthetic
- Cable Guard: Carbon rod
- Limbs: Max Pre-load Quad Limbs
- Draw weights: 50, 60 and 70# peak
- Brace Height: 7 inches
- Axle-to-axle length: 31"
- Mass Weight: 4.2 pounds
- Advertised IBO speed: 332 - 340 fps
- Suggested Retail Price: \$749
- Warranty: Limited Lifetime

My notes:

- **Very quiet**
- **Grip too deep**
- **A little heavy**
- **Rock solid balance**
- **Little kick**
- **No detectable vibration**
- **A little rough on the draw**



Rytera Alien Nemesis

My favorite Nemesis feature is the grip. It is well rounded, comfortable and positions my hand perfectly at full draw. I was surprised it did not make the top three in that category! I also thought the draw cycle was fairly smooth even though it did not make the top three there either. The Nemesis has average quietness; however, it came alive in the shock and vibration category where it placed number 2!

SPECS

- Eccentric System: Hybrix Duo Cam
- Draw lengths: 27 - 30 inches in ½ inch increments
- Letoff: Up to 85%
- String: Stone Mountain Dakota, 8125, 57.75"
- Cables: Stone Mountain Dakota, 8125, 38.75"
- Riser: Reflex, CNC machined from solid aluminum billet
- Finish: Next G1, Skulz Camo, Solar Flare Red, Lunar White, Dark Star Black, Dark Metallic Purple
- Grip: One-piece domed aluminum
- Cable Guard: Carbon rod
- Limbs: Gordon Composite
- Draw weights: 35-50#, 45-60# and 55-70#
- Brace Height: 7 inches
- Axle-to-axle length: 34 inches
- Mass Weight: 4 pounds
- Advertised IBO speed: 335 fps
- Suggested Retail Price: \$799.99
- Warranty: 10 year/Limited Lifetime

My notes:

- Really like the grip
- Some lasting vibration
- Fairly smooth draw
- Not much kick – better than most
- Average shot noise
- Well balanced
- Little heavy



Elite Judge

My favorite Judge feature is the Elite grip. They make one of the best grips in the industry in my opinion. While the Judge did not crack the top 3 in any of the categories it was close a couple of times. The draw cycle was indeed smooth which was demonstrated by a good score.

SPECS

- Eccentric System: Two Track Revolution Cam
- Draw lengths: 26 - 30 inches in ½ inch increments
- Letoff: 80% +
- String: 452X, 58-7/16"
- Cables: 452X, 39-1/2"
- Riser: Reflex, Forged and CNC machined aluminum
- Finish: Realtree AP, Realtree MAX-1, Black, Anthracite Metallic
- Grip: 2-piece laminated wood
- Cable Guard: Carbon rod
- Limbs: Layered Composites
- Draw weights: 50 - 90# in 10# increments
- Brace Height: 6 inches
- Axle-to-axle length: 34-7/8 inches
- Mass Weight: 4.3 pounds
- Advertised IBO speed: 343 - 347 fps
- Suggested Retail Price: \$869.99
- Warranty: Limited Lifetime and Hunt Guarantee

My notes:

- Great grip
- Significant kick and vibration
- Smooth draw
- Good balance
- Louder than some of the others



Mathews Monster 7

The Monster 7 is a little heavy, however, it is not out of line with most of the other speed bows and it is noticeably lighter than the original Monster I shot last year. The Monster 7 never left the top three in the individual categories and captured the number one spot twice with its super smooth draw and comfortable grip! It recorded a number 1 win in the subjective tally and a number 2 when speed was factored in.

SPECS

- Eccentric System: Dual Cam, Advanced Vectoring System
- Draw lengths: 26 - 31 inches in ½ inch increments, modular
- Letoff: 65 and 80%
- String: Zebra BCY 450, 59-1/8"
- Cables: Zebra BCY 450, 30-7/8" and 12"
- Riser: Grid Lock, reflex, CNC machined aluminum
- Finish: Black, Realtree AP, Red Smoke, Orange Smoke
- Grip: SlimFit Inline, Laminated Walnut
- Cable Guard: Dual Harmonic Damper Roller Guard
- Limbs: Quad V-Lock, split
- Draw weights: 40 - 80# in 10# increments
- Brace Height: 7 inches
- Axle-to-axle length: 33-1/2"
- Mass Weight: 4.35 pounds
- Advertised IBO speed: Up to 342 fps
- Suggested Retail Price: \$899
- Warranty: Limited Lifetime

My notes:

- Like the grip
- Little heavy but better than Monster
- Very smooth draw
- Very little kick and could not detect any vibration
- Quiet!



Hoyt AlphaBurner

The AlphaBurner liked the number 3 spot in 3 of the categories and only slipped below the mark in the shock and vibration arena. The notable kick and lasting vibration held it back there. The draw cycle is smooth and scored well despite the short valley and the grip is very comfortable. Solid on the target. Hoyt also scored well in the shot noise category as the AlphaBurner barely missed the number 2 spot!

SPECS

- Eccentric System: Spiral X Cam and ½
- Draw lengths: 22 - 30 inches in ½ inch increments
- Letoff: 65 - 70%
- String: Fuse, 58.5"
- Cables: Fuse, 39.25"
- Riser: TEC Riser, Reflex, CNC machined aluminum
- Finish: Hunting - Realtree APG, Black Out, Half & Half (Black Out riser with APG limbs); Target anodize – Blue Fusion, Red Fusion, Orange, Cobalt Blue and Jet Black. Pearl White Paint.
- Grip: 180 Pro Fit, one-piece thermo plastic elastomer
- Cable Guard: Carbon rod
- Limbs: XT 2000, 5-layer laminate
- Draw weights: 50, 60, 70 and 80# peak
- Brace Height: 6 inches
- Axle-to-axle length: 34.75"
- Mass Weight: 4.3 pounds
- Advertised IBO speed: 340 fps
- Suggested Retail Price: \$999
- Warranty: Limited Lifetime

My notes:

- Smooth draw – no valley
- Little heavy
- Comfy grip
- Some kick and lasting vibration
- Good balance
- Quiet



PSE Axe 6

PSE's Axe 6 had great scores in the balance/feel and draw cycle categories. It also did ok in the shot noise category, however, it dipped low in shock/vibration. The Axe grip is one that actually gets better at full draw. It is ok at rest but at full draw it is not only comfortable but functional as well. When you couple the likeable grip with a low mass weight you end up with a good score! The draw cycle is sharp at the onset but gets smoother all the way to the end. The Axe 6 also demonstrates good balance at full draw.

SPECS

- Eccentric System: Axe Cam
- Draw lengths: 25.5 – 30.5 inches in ½ inch increments, adjustable inner cams
- Letoff: 75%
- String: America's Best, BCY 8125, 64-7/8"
- Cables: America's Best, BCY 452X, 33-3/4 and 35-1/4"
- Riser: Reflex, CNC machined aluminum
- Finish: Anodized Black or Film Dipped in Mossy Oak Treestand. Other colors available through the PSE Custom Shop
- Grip: SLT grip, rubber side inserts
- Cable Guard: Cam-Lock rod
- Limbs: Extreme Pre-Load, Next Generation X Technology, split
- Draw weights: 60 and 70# peak
- Brace Height: 6 inches
- Axle-to-axle length: 32.5"
- Mass Weight: 4 pounds
- Advertised IBO speed: 337-345 fps
- Suggested Retail Price: \$749.99
- Warranty: Limited Lifetime

My notes:

- **Very light**
- **Good grip at full draw**
- **Not bad kick**
- **Lasting vibration**
- **Draw is stiff to start – gets smoother**
- **Good balance**



Bowtech Destroyer

Bowtech should be pleased with their Destroyer's performance in this year's test. Considering the great speed this bow has an amazing lack of shock and vibration. Noise or lack thereof, follows suit. In those categories the Destroyer landed the number one position. Where the Destroyer found itself below the number 3 mark was in the areas of balance/feel and draw cycle. I can understand the balance/feel scores because the grip is a bit too deep but the sub 3 showing in draw cycle surprised me. The Destroyer hit the number 2 mark in the combined subjective results and sat atop the pack when speed was factored in.

SPECS

- Eccentric System: OverDrive Binary
- Draw lengths: 25 - 30 inches in ½ inch increments, rotating module
- Letoff: 80%
- String: BCY 452X, 61.56"
- Cables: BCY 452X, 35.63"
- Riser: Reflex, fully machined aluminum forging
- Finish: Realtree Hardwoods HD (standard), Black Ops, APG HD, Mossy Oak Infinity, Optifade Open Country, Optifade Forest, Next FLX
- Grip: One-piece polymer
- Cable Guard: FLX Roller Guard
- Limbs: HardCore 7 Layer Laminate
- Draw weights: 50, 60 and 70# peak
- Brace Height: 6 inches
- Axle-to-axle length: 32-3/8"
- Mass Weight: 4.1 pounds
- Advertised IBO speed: 342 - 350 fps
- Suggested Retail Price: \$899 to \$949
- Warranty: Limited Lifetime

My notes:

- Smooth draw
- Best in shock and vibration by far
- Very quiet
- Grip a little deep (front to back)
- Good weight, better than most but not as light as PSE
- Good balance



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