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2011

Head-2-Head Blind Bow Test

Produced and Sponsored by

Bowsite.com



Performed by Jon Silks

Silks Outdoors

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2011 H2H INTRO

The H2H Bow Test is in its 9th year and is still the only test that has a rigorous method to assess the subjective aspects of a hunting rig – subjective aspects that play a big part in our purchasing decisions. How can we test subjective elements? We use a blindfold to keep brand knowledge and brand loyalty at bay. Yes, everyone is jumping on the multiple-bow-test bandwagon that we started many years ago, however, none go to the extent we do or have the distinction we do.

H2H testing methods also dictate a unique ranking structure. Bows are ranked first to last, each receiving a true position based on an extensive selection and elimination process. A detailed explanation of these methods can be found in the Test procedure section of this test. Out of the eight bows tested and ranked in each of the two groups (Shooter's Bows/Speed Bows) only the top four will be viewable. Speed results are the only exception – you will see the full set of data on speed. Why only show the top four? This is done to protect the companies and individuals that are represented by a bow that is listed 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 8th place out of 8 bows in a test viewed by ~60,000 bowhunters. These are all quality bows worthy of a first-hand look should you be in the market for a new rig.

You will be presented with the following information:

- Pictures of each bow
- Specs for each bow
- Silks Outdoors Bow Analysis Program
 - Draw Curve
 - Kinetic Energy
 - Stored Energy
 - Dynamic Efficiency
 - Etc.
- My personal commentary on each bow
- Individual category results
 - Draw cycle
 - Grip
 - Shock/vibration
 - Shot noise
 - Speed
- Two overall results
 - Overall subjective (4 subjective categories combined)
 - Overall subjective plus speed

H2H Prologue

How we chose the bows to be tested in 2011:

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 CRX 32
- Bowtech Assassin
- Martin Onza 3
- Elite Hunter
- APA Viper V7
- G5 Prime Centroid
- Mathews Z7 Xtreme
- My wild card = Diamond Outlaw

SPEED BOWS

- PSE Dream Season EVO
- Elite Pulse
- Darton DS3800
- APA Mamba M7
- Bear Carnage
- Mathews Z7 Magnum
- Bowtech Invasion CPX
- My wild card = Strother SX-1

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. Every year we have a couple of guys swear they are testing a bow that isn't even in the test! 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 accomplishes 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
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Voting and Test Procedures

Choosing the sixteen bows (two categories – 8 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 if a bow had an IBO range that spans both categories 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.

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, Grip, 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
7. Evaluator's #7 Pick
8. Evaluator's #8 Pick

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

1. #1 Pick – 8 points
2. #2 Pick – 7 points
3. #3 Pick – 6 points
4. #4 Pick – 5 points
5. #5 Pick – 4 points
6. #6 Pick – 3 points
7. #7 Pick – 2 points
8. #8 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 #8. 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 measured using calibrated dial calipers after the bow is squared up in a vise
- Verify draw weight using a calibrated Chatillon digital force gauge

- Verify draw length using my Silks Outdoors Bow Analysis Program, which is a combination of a custom software package, Elite 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 average over 5 shots

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 suggesting that I am 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.



2011 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.

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

Shooter Team

Chad Smith

Bryan Fultz

Todd Jodon

Tom Glass

Tom Yoder

Neil Hosterman

Logan Confer

Roy Brodzina

Speed Team

Chad Smith

Michael Silks

Andy Hoskins

Tony Greenawalt

Ed Greenawalt

Kyle Palm

Todd Emeigh

Tyler Silks

2011 H2H Support Team:

This test takes an incredible amount of time and hard work on the part of many participants. I was even lucky enough to get my 16-year-old daughter **Rebekah Silks** involved this year



Special Thanks

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



Hostage Pro Arrow Rests



Easton Archery for providing their Bow Force Mapper System, Chronograph, Grain Scales and arrows.



New Archery Products for providing QuikTune 3000 Arrow Rests



American Whitetail Targets for providing the huge bag targets needed for the blindfolded testers!



Pro Chrono Digital chronograph

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. Elite Pulse	49
2. PSE Dream Season EVO	42
3. Strother SX-1	36
4. Darton DS3800	36

Smooth Bows

Mfr	Score
1. Hoyt CRX32	50
2. Elite Hunter	46
3. G5 Prime Centroid	39
4. Mathews z7 Xtreme	34

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. Bear Carnage	61
2. PSE Dream Season EVO	47
3. Mathews z7 Magnum	44
4. Bowtech Invasion	40

Smooth Bows

Mfr	Score
1. Hoyt CRX32	59
2. Mathews z7 Xtreme	58
3. Elite Hunter	45
4. APA Viper V7	36

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. Mathews z7 Magnum	63
2. PSE Dream Season EVO	53
3. Bear Carnage	47
4. Elite Pulse	37

Smooth Bows

Mfr	Score
1. Mathews z7 Xtreme	61
2. Hoyt CRX32	53
3. Elite Hunter	37
4. APA Viper V7	36

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. Elite Pulse	56
2. PSE Dream Season EVO	52
3. Mathews z7 Magnum	47
4. Bowtech Invasion	36

Smooth Bows

Mfr	Score
1. Elite Hunter	52
2. G5 Prime Centroid	44
3. APA Viper V7	43
4. Mathews z7 Xtreme	42

SPEED RESULTS

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

Speed Bows

Make	Advertised IBO	Average Speed Results	Score	Rank
Darton DS-3800	345-350	310.68	64	1
PSE Dream Season EVO	337-345	307.72	56	2
Elite Pulse	340-343	301.00	48	3
Bowtech Invasion	343	300.82	40	4
Strother SX-1	Up to 347	299.18	32	5
APA Mamba M7	Up to 344	298.60	24	6
Mathews z7 Magnum	Up to 340	298.14	16	7
Bear Carnage	Up to 345	294.26	8	8

Smooth Bows

Make	Advertised IBO	Average Speed Results	Score	Rank
Bowtech Assassin	333	299.28	64	1
Hoyt CRX32	323	298.90	56	2
Diamond Outlaw	330	296.14	48	3
G5 Prime Centroid	332	295.24	40	4
Mathews Z7 Xtreme	Up to 330	292.60	32	5
Martin Onza	330-340	286.92	24	6
Elite Hunter	319-323	285.38	16	7
APA Viper V7	Up to 332	282.04	8	8

FINAL RESULTS

The results of the 2011 H2H Blind Bow Test are:

Speed Bows**SUBJECTIVE ONLY SCORES/PLACE**

Mfr	Model	Score	Rank
PSE	Dream Season	194	1
	EVO		
Mathews	Z7 Magnum	186	2
Elite	Pulse	170	3

SPEED + SUBJECTIVE SCORE/PLACE

Mfr	Model	Score	Rank
PSE	Dream Season	250	1
	EVO		
Elite	Pulse	218	2
Mathews	Z7 Magnum	202	3

Smooth Bows**SUBJECTIVE ONLY SCORES/PLACE**

Mfr	Model	Score	Rank
Mathews	Z7 Xtreme	195	1
Elite	Hunter	180	2
Hoyt	CRX32	177	3

SPEED + SUBJECTIVE SCORE/PLACE

Mfr	Model	Score	Rank
Hoyt	CRX32	233	1
Mathews	Z7 Xtreme	227	2
Elite	Hunter	196	3

2011 Bow Evaluation Commentary

Jon Silks' Personal Bow Commentary

APA Viper V7

I like this bow. The features are cool and mostly useful. I have even had the occasion to use the Fang and the nock wrench in the shop. This bow performed well and cracked the top 4 in 3 of the 4 subjective categories, which is impressive.

Unfortunately it was dead last in speed and that took it out of the running when the speed and subjective scores were combined. The grip, while comfortable, seemed colder than most.

SPECS

- Eccentric System: Venom V2 Single Cam
- Draw lengths: 23.5 – 27.5/ 26.5 – 30.5" in ½ inch increments
- Letoff: 80%, adjustable
- String: Scorpion, 88.25"
- Cables: Scorpion, 33.875
- Riser: Fang Riser, reflexed, CNC machined 6061-T6 aluminum
- Finish: Buckskin Stealth
- Grip: Two-piece Hardwood panels
- Cable Guard: Multi-Position Roller Guide
- Limbs: High Efficiency (HE), 3-Stage
- Draw weights: 50, 60, and 70# peak
- Brace Height: 7 inches
- Axle-to-axle length: 31.25 inches
- Mass Weight: 3.9 pounds
- Advertised IBO speed: Up to 332 fps
- Suggested Retail Price: \$869
- Warranty: Lifetime to Original Owner
- Website: www.apaarchery.com

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



Martin Onza 3

The Onza 3 had a rough test, as it did not crack the top 4 in any category and speed didn't lift it to the top 4 in the overall either. I was surprised it didn't hit the top 4 in the draw cycle category because it is super smooth in my estimation. I also like the leather back grip. This bow is relatively loud and the testers were quick to note that during the test. It has a notable kick with some low level vibration. The Onza 3 is extremely solid at full draw showcasing great balance.

SPECS

- Eccentric System: Nitro Cam
- Draw lengths: 27.5 – 30.5" in ½ inch increments
- Letoff: 80%, adjustable down
- String: Hammerhead BCY, 56.75"
- Cables: Hammerhead BCY, 38"
- Riser: Reflex, Bridged, Modular
- Finish: Next G1 plus Options
- Grip: Vortex Leather-Back
- Cable Guard: Torque Reduction Guard
- Limbs: PowerTough, Gordon
- Draw weights: 50, 60, 70 lb peak
- Brace Height: 7.25"
- Axle-to-axle length: 33.25"
- Mass Weight: 4.0 pounds
- Advertised IBO speed: 330-340 fps
- Suggested Retail Price: \$649.99
- Warranty: Ten Year Full, except strings/cables

My notes:

- Fairly loud, twang
- Low level lasting vibration
- Notable kick
- VERY smooth
- Like the grip



Mathews Z7 Xtreme

Mathews is particularly skillful at producing top-notch rigs year after year. The Z7 Xtreme is an excellent performer, never leaving the top four in any of the subjective or composite categories. Only in speed did it dip to number 5. A short axle-to-axle length makes the Z7 Xtreme very maneuverable while the single cam rolls through the draw cycle with little effort. The test bow demonstrated a remarkably quiet shot, little kick and virtually no vibration. The grip was good other than a small ridge on the upper back portion. Surprisingly stable for such a short bow.

SPECS

- Eccentric System: ZX Solo Cam
- Draw lengths: 24 – 30" in ½" increments
- Letoff: 80%
- String: Zebra Barracuda, 82-7/8"
- Cables: Zebra Barracuda, 30-1/2"
- Riser: Grid Lock
- Finish: Lost Camo, Black
- Grip: SlimFit Inline, walnut wood
- Cable Guard: Reverse Assist Roller Guard
- Limbs: SE5 Composite Limb System
- Draw weights: 40, 50, 60, 65 and 70 pound peak
- Brace Height: 7.375"
- Axle-to-axle length: 28"
- Mass Weight: 3.98 pounds
- Advertised IBO speed: Up to 330 fps
- Suggested Retail Price: \$899
- Warranty: Limited Lifetime

My notes:

- Quiet, quiet, quiet
- Hard to detect any vibration
- Short lived small kick
- Grip good except small ridge
- Compact and maneuverable
- Mathews typical smooth draw
- Surprisingly stable for short axle-to-axle



Hoyt CRX32

The lack of much valley at full draw cost the CRX 32. In the other categories it did incredibly well – two number one slots and a number two rank. This is a great bow from start to finish and while the draw is stiff it does not have any abrupt transitions. The testers did not like how it wanted to sneak out of full draw; however, my guess is that familiarity would soon allow the shooter to relax into the letoff. I like how the CRX 32 handles – it is lightweight, compact and comfortable.

SPECS

- Eccentric System: Fuel Cam
- Draw lengths: 24.5 – 30", .5" increments, modular
- Letoff: ~75%
- String: Fuse Custom, 54.25" for 29" draw
- Cables: Fuse Custom, 36 and 33.75" for 29" draw
- Riser: TEC Riser, Reflex, CNC machined aluminum
- Finish: Realtree AP plus Options
- Grip: 180 Pro Fit, one-piece thermo plastic Elastomer
- Cable Guard: In Line Roller Guard
- Limbs: XTS Pro ARC, 5-layer laminate
- Draw weights: 40 - 90# peak
- Brace Height: 7 inches
- Axle-to-axle length: 32"
- Mass Weight: 3.95 pounds
- Advertised IBO speed: 323 fps
- Suggested Retail Price: ~\$800
- Warranty: Lifetime to Original Owner

My notes:

- Quick kick
- Faint but lasting vibration
- Feels great in hand, handles well, like the grip
- Very quiet
- Very little valley to relax into
- Stiff draw, smooth transitions
- Well balanced
- Lightweight



G5 Prime Centroid

This bow is bigger and heavier than the others but I like it. It has a good feel and the longer axle-to-axle gives it great balance. An excellent draw cycle landed it in the number 2 spot and the unique grip was especially comfortable at full draw. The Centroid is quiet at the shot with a small kick and low level vibration.

SPECS

- Eccentric System: Parallel Cam, Dual
- Draw lengths: 27-31", ½" increments
- Letoff: 80%, Adjustable
- String: Custom BCY with Gore Fibers, 26" Plus Yokes
- Cables: Custom BCY with Gore Fibers, 38.8"
- Riser: Reflex, Forged 7000 Series aluminum
- Finish: Optifade, Realtree, Black
- Grip: G10 Laminate, 2-Piece
- Cable Guard: Ti-Glide Flexing Cable System
- Limbs: C1 Laminate, Parallel
- Draw weights: 50, 60 and 70 pound peak
- Brace Height: 7 inches
- Axle-to-axle length: 34"
- Mass Weight: 4.3 pounds
- Advertised IBO speed: 330 fps
- Suggested Retail Price: \$999.99
- Warranty: Lifetime
- Website: www.g5prime.com

My notes:

- Relatively big
- Super smooth draw cycle
- Quiet
- Small kick
- Low level lasting vibration
- Grip is extra comfortable at full draw



Diamond Outlaw

Before I get started with this bow it should be mentioned that it has the lowest Manufacturer's Suggested Retail Price (MSRP) of the bunch. The Outlaw will most likely be sold in stores for less than \$500...and that is loaded with their R.A.K. system! Your R.A.K. equipped bow comes with a 4" stabilizer, comfort wrist sling, BCY string loop, Octane Hostage XL Arrow Rest, One-piece 5 arrow Ultralite quiver, 4-Pin Truglo Apex sight, Dura-FLX String Dampening components and an alloy peep. All you have to do is buy some arrows and you are ready to go. The value is off the charts.

Diamond had a tough test when put up against the other bows, most of which have MSRPs far above the Outlaw (200 to 400\$ more!). The Diamond rig did not crack the top 4 in any of the categories. A ridge where the grip meets the web of the hand was an issue, as it was not blended well with the shape of the riser. Shot noise was not objectionable; however, it had a different frequency that was not popular. A solid back wall and shoulder-soothing letoff made shooting the Diamond a pleasure.

SPECS

- Eccentric System: Throttle Single Cam
- Draw lengths: 26.5-30.5", Rotating Module
- Letoff: 80%
- String: Octane
- Cables: Octane
- Riser: Reflex, Aluminum
- Finish: Mossy Oak Treestand
- Grip: One-piece Synthetic
- Cable Guard: Rod and Slide
- Limbs: Parallel Gordon Glass
- Draw weights: 50, 60 and 70# peak
- Brace Height: 7 inches
- Axle-to-axle length: 32"
- Mass Weight: 3.8 pounds
- Advertised IBO speed: 330 fps
- Suggested Retail Price: \$549
- Warranty: Lifetime to Original Owner
- Website: www.diamondarchery.com

My notes:

- **Comparatively significant kick and notable vibration**
- **Average shot noise**
- **Descent draw**
- **High letoff**
- **Solid wall**
- **Very stable**



Bowtech Assassin

Like the Diamond Outlaw this is one of the lowest MSRP bows in the test and it is equipped with the Ready Aim Kill (R.A.K.) system, which includes a 4" stabilizer, comfort wrist sling, BCY string loop, Octane Hostage XL Arrow Rest, One-piece 5 arrow Ultralite quiver, 4-Pin Truglo Apex sight, Dura-FLX String Dampening components and an alloy peep. Buy a few arrows and you are off to the races. This bow is all about value.

The Assassin is a different type of bow than we have seen out of Bowtech, going away from the Captain/General type of rigs. While it is faster, it did not score as well in the other categories where previous Bowtech entries have done very well. All that being said...I like the Assassin. It is a solid all-around rig that is well balanced, stable and handles well. A notable kick, shot noise with a unique frequency and average grip kept this bow from hitting the top 4.

SPECS

- Eccentric System: Binary Cam System
- Draw lengths: 26 – 30"
- Letoff: 65-80%
- String: Octane
- Cables: Octane
- Riser: Reflex, Aluminum
- Finish: Blackops, Mossy Oak Treestand
- Grip: One-piece, Synthetic
- Cable Guard: Rod and Slide
- Limbs: Parallel Gordon Glass
- Draw weights: 50, 60 and 70 lb Peak
- Brace Height: 7 inches
- Axle-to-axle length: 30.625"
- Mass Weight: 3.8 pounds
- Advertised IBO speed: 333 fps
- Suggested Retail Price: \$649
- Warranty: Lifetime to original Owner
- Website: www.bowtecharchery.com

My notes:

- Fairly quiet, different frequency
- Notable kick
- Small, quick vibration
- Like the grip
- Sturdy draw but not harsh
- Light
- Stable
- Like the bow



Elite Hunter

This bow did extremely well in the test with testers often making special comments about it. The Hunter just has a certain “feel” that makes it stand out. It reminded me of the way my favorite baseball bat fit me back in the day. It is no secret that Elite grips are among my favorites available and a second place finish in that category was no surprise. A notable kick dropped it down to the number three spot in the shock/vibration category and the resultant noise landed it in the same position for shot noise. The Elite Hunter never dropped out of the top 4 in the subjective categories, however, it hit next to last in speed.

SPECS

- Eccentric System: ESX Cams
- Draw lengths: 25-30” in .5” increments
- Letoff: 80% +
- String: 54.5”
- Cables: 36.375”
- Riser: Reflex, Forged/CNC machined aluminum
- Finish: Realtree AP with Many Options
- Grip: 2-Piece Laminated Wood
- Cable Guard: Cable Rod and Slide
- Limbs: 5-Layer Barnsdale Laminate
- Draw weights: 40, 50, 60, 70, 80 lb Peak
- Brace Height: 7.5”
- Axle-to-axle length: 31.75”
- Mass Weight: 3.9 pounds
- Advertised IBO speed: 319-323 fps
- Suggested Retail Price: \$869.99
- Warranty: Limited Lifetime
- Website: www.elitearchery.com

My notes:

- **An all-around good bow.**
- **Notable kick**
- **Not much vibration**
- **Like the back wall**
- **Smooth, smooth draw**
- **Handles well**
- **Quiet**



Mathews z7 Magnum

I noticed that I used the word “very” quite a bit in my notes for this bow. It does very well in most categories falling off a little in grip only. The bow has little back talk at the shot in terms of shock, vibration or noise. The bow is a little heavy and handling is average. The draw cycle is also very smooth with no harsh transitions anywhere and the 65 pound pull felt more like 60. The grip is smooth, comfortable and functional but the larger size kept it out of the top four in this category.

SPECS

- Eccentric System: ZX Solo Cam
- Draw lengths: 24 – 30” in ½” increments, cam specific
- Letoff: 80%
- String: Zebra Barracuda
- Cables: Zebra Barracuda
- Riser: Grid Lock
- Finish: Lost Camo, Black
- Grip: SlimFit Inline, walnut wood
- Cable Guard: Reverse Assist Roller Guard
- Limbs: SE5 Composite Limb System
- Draw weights: 40, 50, 60, 65 and 70 pound peak
- Brace Height: 6.375”
- Axle-to-axle length: 32”
- Mass Weight: 4.25 pounds
- Advertised IBO speed: Up to 340 fps
- Suggested Retail Price: \$999.00
- Warranty: Limited Lifetime

My notes:

- **Very little kick**
- **Very little vibration**
- **Very smooth**
- **Very quiet**
- **A little heavy**
- **Average handling**
- **Comfortable and functional grip**



APA Mamba M7

APA's Mamba has all the great features that the Viper has including the Fang riser, nock pliers, broadhead wrench, sharpener, carrying handle and pin that can be used to remove tension from the string. The riser finish looks cool too. The Mamba is fairly light and handles/balances very well. Regardless of wrist position the grip is functional and comfortable. The draw is fairly smooth and there is not much kick sat the shot, however, there is notable vibration. The bow was louder than the others.

NOTE – this is a totally different bow with a quality stabilizer and string silencers attached – they made a HUGE difference on this bow. With these small additions this bow would have been right there with the best of them.

SPECS

- Eccentric System: Mamba Dual Cam
- Draw lengths: 26-31" in ½ inch increments
- Letoff: 75%
- String: Scorpion, 53.75"
- Cables: Scorpion, 33.75"
- Riser: Fang Riser, reflexed, CNC machined 6061-T6 aluminum
- Finish: Buckskin Stealth
- Grip: Two-piece Hardwood panels
- Cable Guard: Multi-Position Roller Guide
- Limbs: High Efficiency (HE), 3-Stage
- Draw weights: 50, 60, and 70# peak
- Brace Height: 7 inches
- Axle-to-axle length: 32.25 inches
- Mass Weight: 3.9 pounds
- Advertised IBO speed: Up to 344 fps
- Suggested Retail Price: \$869
- Warranty: Lifetime to Original Owner
- Website: www.apaarchery.com

My notes:

- **Bow handles very well**
- **Grip is good regardless of high or low wrist**
- **Very smooth until near the end**
- **Not much kick**
- **Notable vibration**
- **Somewhat loud**
- **Amazing difference with stabilizer/string silencers**



PSE Dream Season EVO

PSE's EVO is one of the top bows on the market – fast bows, slow bows – doesn't matter. This is a solid all-around rig regardless of the competition. The grip, while not my favorite, has grown on me, especially at full draw where it counts. The EVO's slender frame, narrow footprint and low mass weight make it a great handling bow as well. At the shot there is a small and short lived kick with a slight buzz, however, the shot noise is very quiet.

SPECS

- Eccentric System: Axe + Cams
- Draw lengths: 25.5 - 30" in ½ inch increments
- Letoff: 75%
- String: America's Best, 64.875
- Cables: Americas Best, 33.75 and 35"
- Riser: Planar Flex
- Finish: Satin Black, Skulz Camo or Mossy Oak Break Up Infinity
- Grip: B.E.S.T. Raptor
- Cable Guard: Rod and slide
- Limbs: 961 4th generation X Technology
- Draw weights: 50, 60, and 70# peak
- Brace Height: 6 inches
- Axle-to-axle length: 32.5 inches
- Mass Weight: 4.4 pounds
- Advertised IBO speed: 337-345
- Suggested Retail Price: \$849.99
- Warranty: limited Lifetime to Original Owner
- Website: www.pse-archery.com

My notes:

- **Grip grows on you**
- **Bow handles extremely well**
- **Small quick kick**
- **Slight buzz**
- **Quiet**



Bowtech Invasion

Bowtech's invasion handles fairly well and the grip is especially comfortable for a low wrist position. The draw cycle is mostly smooth and the bow did well in that category. This bow has very little kick, however, the lasting vibration that followed kept it out of the top four in the shock/vibration category. This bow is also fairly quiet and made even quieter with the addition of a stabilizer and string silencers.

SPECS

- Eccentric System: OverDrive Binary
- Draw lengths: 26 – 30", in ½" increments
- Letoff: 75%
- String: Octane, 58-9/32 inches
- Cables: Octane, 34-5/16 inches
- Riser: Center Pivot Extreme
- Finish: Mossy Oak Treestand Plus Options
- Grip: Two-piece DymondWood
- Cable Guard: FLX-Guard
- Limbs: 7-Layer Hardcore Limbs
- Draw weights: 50, 60, 70 and 80 pound peak
- Brace Height: 7 inches
- Axle-to-axle length: 31.03"
- Mass Weight: 3.9 pounds
- Advertised IBO speed: 343 fps
- Suggested Retail Price: \$949.00
- Warranty: Lifetime to original owner
- Website: www.bowtecharchery.com

My notes:

- **Handles well**
- **Great grip for low wrist position**
- **Draw is fairly smooth**
- **Very little kick – very little**
- **Lasting vibration'**
- **Quiet – better with stab/string silencers**



Elite Pulse

The Elite Pulse has one of my favorite grips of all-time and it pulled a number one in the grip category. The draw cycle was another big win for Elite – another number one. The bow is light in the hand and is stable at full draw. The only downfall for this rig was the notable shock and vibration felt at the shot, both of which were improved significantly with the addition of a quality stabilizer and string silencers. The bow was surprisingly quiet in my opinion; however, it did not break into the top four in that category.

SPECS

- Eccentric System: EFX Cams
- Draw lengths: 26-30" in .5" increments
- Letoff: 80% +
- String: 58.4375"
- Cables: 39"
- Riser: Reflex, Forged/CNC machined aluminum
- Finish: Realtree AP with Many Options
- Grip: 2-Piece Laminated Wood
- Cable Guard: Cable Rod and Slide
- Limbs: 5-Layer Barnsdale Laminate
- Draw weights: 50, 60, 70lb Peak
- Brace Height: 6"
- Axle-to-axle length: 34.25"
- Mass Weight: 4.3 pounds
- Advertised IBO speed: 340-343 fps
- Suggested Retail Price: \$869.99
- Warranty: Limited Lifetime
- Website: www.elitearchery.com

My notes:

- **Awesome grip**
- **Super smooth draw cycle**
- **Handles very well**
- **Stable**
- **Notable kick and vibration – made better with stabilizer/string silencers**
- **Surprisingly quiet**



Bear Carnage

The Carnage has very little kick at the shot followed by some vibration that is short lived. While the grip was a little square the material and transitions made it quite comfortable. The draw cycle was very smooth other than a hasty drop into the valley. This is a VERY quiet bow. Bear's Carnage had mixed results – two very good categories and two not-so-good categories. Another bow on the edge of stardom.

SPECS

- Eccentric System: Skeleton Single Cam
- Draw lengths: 25.5 – 30.5 inches, ½ inch increments
- Letoff: 80%
- String: Bear Contra-Band HP, 92-3/16 inches
- Cables: Bear Contra-Band HP, 33-9/16 inches
- Riser: Reflex, CNC Machined
- Finish: Realtree APG and Shadow Series
- Grip: One-piece Synthetic Bear Logo
- Cable Guard: 4X4 Roller Guard
- Limbs: Max Pre-Load Quad Limbs
- Draw weights: 50, 60 and 70# peak
- Brace Height: 7.25 inches
- Axle-to-axle length: 32"
- Mass Weight: 4.0 pounds
- Advertised IBO speed: Up to 345 fps
- Suggested Retail Price: \$849.00
- Warranty: Limited Lifetime to Original Owner
- Website: www.beararcheryproducts.com

My notes:

- **Very little kick**
- **Incredibly quiet**
- **Notable vibration but super quick**
- **Good grip – maybe a little square**
- **Smooth except hast drop into valley**
- **A slight bit heavy to handle**



Strother SX-1

The SX-1 is a bow on the verge of greatness. It was knocking on the door in every category and had the third most popular grip of the bunch. A tweak here and a tweak there and this bow would be gunning for the number one spot. I liked the grip – it could have been even higher with some better blending. The draw cycle is smooth with a slight bit of loading near the back end. There is very, very little kick to speak of, however, there was some notable vibration. The bow was quite quiet as well.

SPECS

- Eccentric System: Hyper-S Cam
- Draw lengths: 26 -30" in .5" increments
- Letoff: 80%
- String: 57.56"
- Cables: 38.94"
- Riser: Reflex, CNC machined aluminum
- Finish: Predator Brown Deception, Black Death, Combo
- Grip: 2-Piece Laminated Wood
- Cable Guard: Cable Rod and Slide
- Limbs: Parallel, split
- Draw weights: 50, 60, 70, 80 lb Peak
- Brace Height: 6.5"
- Axle-to-axle length: 34.0625"
- Mass Weight: 4.1 pounds
- Advertised IBO speed: Up to 347 fps
- Suggested Retail Price: ~\$839
- Warranty: Limited Lifetime
- Website: www.strotherarchery.com

My notes:

- **Good grip, small ridge**
- **Good draw, little loading near end**
- **Handles well – good mass weight**
- **Very little kick**
- **Notable vibration**
- **Quiet**



Darton DS-3800

This is the stallion of the bunch with incredible speeds generated right out of the box. Besides speed Darton's popular grip is the highlight of this bow. The bow is a little heavy and there is a notable kick and some vibration at the shot, which kept it out of the top four in a couple categories. I added a quality stabilizer and some simple string silencers to see what advantage might be gained. The vibration was killed while the kick was not noticeably affected. I personally thought the DS-3800 was fairly quiet at the shot, however, it did not crack the top four in that category.

SPECS

- Eccentric System: DualSync
- Draw lengths: 25-31 inches, ½ inch increments, modular
- Letoff: 80 Percent, Effective
- String: Scorpion, 59.75 inches
- Cables: Scorpion, 32.69 inches
- Riser: CNC machined aluminum, reflex
- Finish: Realtree APG, Shadow Black
- Grip: Two-piece, molded VibraGrip
- Cable Guard: PTR cable guard
- Limbs: Laminated Gordon Glass
- Draw weights: 40, 50, 60 & 70 pounds peak
- Brace Height: 6.0"
- Axle-to-axle length: 33.81"
- Mass Weight: 4.1 pounds
- Advertised IBO speed: 345-350 fps
- Suggested Retail Price: \$829.99
- Warranty: Limited Lifetime to original owner
- Website: www.dartonarchery.com

My notes:

- **Fast!**
- **Somewhat heavy**
- **Comfortable grip**
- **Stiff draw but the transitions are not harsh**
- **Notable kick**
- **Average vibration**
- **Fairly quiet**



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