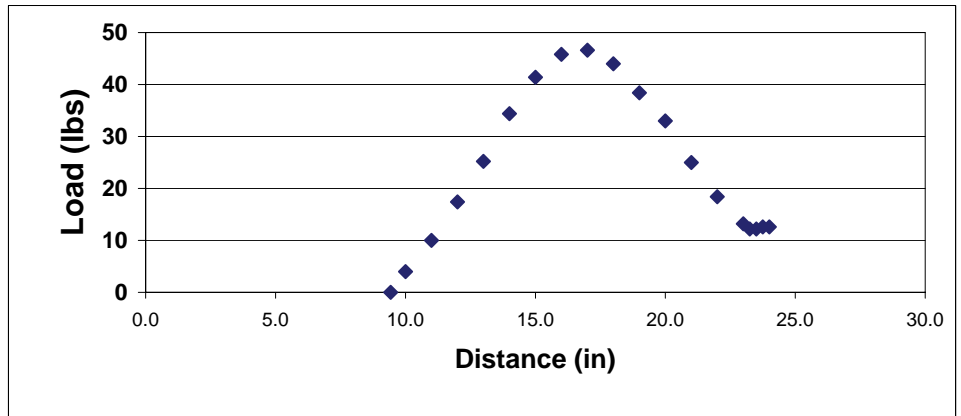




## Bow Report Mission Menace

|                 |                |               |      |     |                 |     |        |
|-----------------|----------------|---------------|------|-----|-----------------|-----|--------|
| TestID:         | Mission Menace |               |      |     |                 |     |        |
| Tested By:      | JS             |               |      |     |                 |     |        |
| Date:           | 11/16/2008     | Draw Length:  | 23.5 | in  | Speed:          | 205 | ft/sec |
| Time:           | 7:04:34 PM     | Brace Height: | 7.68 | in  | Power Stroke:   |     | ft     |
| Units:          | Unit = l       |               |      |     | Kinetic Energy: |     | ft*lbs |
| Min Load:       | 12.2           | Max Load:     | 46.6 | lbs | Stored Energy:  |     |        |
| Min Pos:        | 23.25          | Max Pos:      | 17   | in  | Dynamic Eff.:   |     |        |
| Pre Test Comm:  |                |               |      |     |                 |     |        |
| Post Test Comm: |                |               |      |     |                 |     |        |

| Distance | Load R1 |
|----------|---------|
| 9.43     | 0.00    |
| 10       | 4.00    |
| 11       | 10.00   |
| 12       | 17.40   |
| 13       | 25.20   |
| 14       | 34.40   |
| 15       | 41.40   |
| 16       | 45.80   |
| 17       | 46.60   |
| 18       | 44.00   |
| 19       | 38.40   |
| 20       | 33.00   |
| 21       | 25.00   |
| 22       | 18.40   |
| 23       | 13.20   |
| 23.25    | 12.20   |
| 23.5     | 12.20   |
| 23.75    | 12.60   |
| 24       | 12.60   |



**M**ission Archery by Mathews is in the business of providing their customers with a quality product that has a high performance to value ratio. In other words they make bows that get the job done for less money.

Mission takes that same charter to the youth bow market in the form of their new Menace bow. The Menace is a short axle-to-axle rig that has a wide range of adjustment in both draw length and draw weight. A smooth draw and lack of vibration, shock or shot noise round out the new Mission youth package.

**Riser:** A successful youth bow starts with a lightweight riser. Mission builds their Menace around a relatively short reflexed riser that measures approximately 17.75 inches in length. The extruded aluminum structure is formed with several cutouts, chamfers, thinned out areas, arcs and a large sight window, all of which work to reduce the overall mass weight to only 2.92 pounds. Cost is kept to a minimum with the extrusion process

as it creates a component that is almost ready to use "as is". Only minor work is needed to get it to the finished stage, which reduces the time (money) invested. That savings is then returned to the customer with a lower cost product – something that is generally a major selling point for most looking for a youth bow.

Standard accessory mounting holes are available for sights, arrow rests and stabilizers (both front and back). In recent years I most often see the rear-facing stabilizer hole being used for a string vibration suppression system rather than an actual stabilizer. A straight composite cable guard fits into, and is secured by, a small block-like structure that is machined directly into the riser and protrudes opposite the sight window. Mission uses their Z-Slide cable containment unit on the Menace.

Mission outfits the Menace with a one-piece molded rubber composite grip. The grip is formed with a contoured thumb groove and heel for a natural fit and added comfort. A consistent grip is important for a consistent and accurate shot. The contours allow for that consistency and the

rubber material, while providing a measure of warmth and softness, is hard enough to permit repeated hand positioning. Some rubber grips are soft and can induce torque. A section of the grip reaches up to extend the width of the shelf for increased safety.

Mission film dips the Menace riser in Max 4 Camo in the same in-house facility that decorates the Mathews bows.

*So, what does all this mean to Mom, Dad and the shooter?*

Mission focuses on providing a great youth bow for a reasonable price. The aluminum material and extrusion process produces the strength, durability and performance needed along with lower manufacturing costs. This lower cost is reflected in the suggested retail price of \$249.00 for the Menace with a black riser and camo limbs or 269.99 for an all camo finish.

A contoured rubber composite grip is an excellent choice for the youth hunter as it joins functionality with warmth and comfort.

Easy handling and maneuverability are also key features for a youth bow and the Menace steps up with a



**One of the first twin cam designs Matt McPherson has brought to market in 20 years is this new Mission Menace. Utilizing twin cams with rotating inner modules allowed the Mathews, Inc. founder to provide a wide draw length adjustment range.**

mass weight of only 2.92 pounds and an axle-to-axle length of 31 inches.

**Limbs/Limb Pockets:** Continuing to focus on reducing costs Mission uses a molded plastic material for the

Menace limb pockets. The pockets are molded into a typical closed-end “cup” style configuration that isolates, cradles and supports each of the four individual limb sections. Each individual limb measures a little over 12.5 inches and is tipped with a metal cap that harnesses the axle and limb tip.

While costs are kept to a minimum, performance is not compromised. Mission designed the Menace pocket to pivot. Pivoting limb pockets are known for their superior characteristics as compared to stationary pockets that require the limbs to move independently. A pivoting limb pocket holds the relationship between the limb and pocket constant while moving the larger structure of the pocket for weight adjustment. The limb-to-pocket and pocket-to-riser interface is critical to accuracy and consistency. Most adult bows are now made with pivoting limb pockets, however, many youth bows are still outfitted with independently moving limbs.

Limbs adjust incrementally from 16-52 pounds depending on the draw length selected. For instance with the 23 inch draw length used for testing the maximum draw weight was approximately 46 pounds. As the young archer grows and gets stronger the draw weight will increase along with the longer draw length.

Again, Mission uses a film dipping process to finish the limbs in the high contrast Advantage Max-4 camo.

*So, what does all this mean to Mom, Dad and the shooter?*

The use of pivoting limb pockets on a youth bow is an indication that Mission is focused on creating a quality bow with excellent performance features.

The easily adjustable draw weight coupled with the no-hassle draw length adjustment (more about this in the next section) make the Menace a bow that mom and dad won't mind fine-tuning.

**Eccentrics:** Youth bows call for adjustability in most instances. The

majority of youth archers are rapidly changing physically and do not stay with one bow setup configuration for long. When a youngster goes through a pair of cheap sneakers in a month or two that is one thing but when they start going through bows quickly it is altogether different – expensive.

Parents or kids who have saved up for a long time to buy a bow will appreciate the draw length adjustability provided by the Menace. A single rotating module allows for draw lengths from 17 to 30 inches, which should cover just about every youth archer. A single screw holds the module in place and no bow press is needed to make any adjustment. Each draw length selection is clearly engraved on the module so you won't have to consult a chart. Also, a hole in each cam is positioned over the cable: just a glance will tell you if the twin cams are in time or if you need to twist the end of one cable up or down.

The oversized 2CPW dual cam eccentric system generates a letoff of approximately 70 percent. A perimeter weight in both cams is designed to reduce shock and vibration and also increase speed. Mission Menace eccentrics are CNC machined from aluminum and are black anodized.

*So, what does all this mean to Mom, Dad and the shooter?*

Lower cost! If you aren't buying a

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bow every six months then you are saving money. Mission's Menace has one of the largest draw length ranges on the market. Great selling point.

No bow press needed for adjustments – more cost savings. The customer doesn't need a pro shop every time Johnny grows an inch!

### Testing:

The Menace was set to a 23 inch draw length and equipped with a single brass nock and N.A.P. QuikTune 3000 arrow rest: Nothing else was added to the bow. With the exception of these two items, every bow is tested unchanged; as it would be shipped to the dealer or customer.

Speed was measured with the chronographs listed above. Normally I test each bow at three different draw weights, however, the Menace will not achieve 50 pounds of pull at the 23 inch draw length setting. Two different draw weights, 40 and 45 pounds were tested with two arrows of different weights, 260 and 328 grains. This should give a moderate picture of what can be expected from this bow in terms of speed generated by various setups. Following are the resulting speed ratings for each in feet per second:

260 grain arrow: 40 pound draw  
192.6

192.3  
192.7  
192.3  
192.1  
Average: 192 fps

260 grain arrow: 45 pound draw  
205.6  
205.4  
205.8  
205.2  
205.0  
Average: 205 fps

328 grain arrow: 40 pound draw  
175.9  
175.4  
175.5  
176.2  
175.7  
Average: 176 fps

328 grain arrow: 45 pound draw  
187.9  
187.6  
187.4  
187.1  
187.6  
Average: 188 fps

Having fun is high on the priority list for most youth archers – actually, it is high on my list as well. A bow that is smooth drawing goes a long way in making the shooting experience enjoyable. A quick look at the attached draw curve tells the story; a gentle climb to the top followed by a brief stay and easy decline into a relatively long valley. All of these characteristics point to a smooth draw. A soft valley puts the finishing touch on the draw, however, it may be necessary to teach the youngster how to achieve a consistent anchor so they may experience increased success with accuracy and consistency.

The lack of shock, vibration or noise at the shot is fantastic – especially for an upright limb configuration. This just adds to the enjoyment of



*Designer Matt McPherson used stainless steel perimeter weights in both cams, to help give the Menace the shock-free feel of a parallel limb bow, without the cost and weight of the long riser that would be used with parallel limbs. Note the speed buttons, how the adjustment holes are in a single line and how the cable falls across the timing hole in the outer portion of the cam. The single cap head screw needs no lock washer since the metal has been dished out to provide self-locking.*

this bow. A rig that jumps or vibrates significantly can certainly take away from the fun factor. The string comes with pre-installed D-Amplifier silencers, which I'm sure contribute to the lack of noise and vibration. These are shaped a bit like mushrooms but apparently the idea came from the "surrounds" around speaker cones. There were no limb-mounted silencers so I affixed a set of Limb Savers for split limbs and they made the super quiet and virtually shock free Menace even more so.

Several of my children shot the Menace and I asked them to comment on how it shot and the grip. From Michael, "That is really quiet. I like the grip too" and "I don't feel anything when I shoot it." Tyler thought that the grip was comfortable, however, it was Rachel who was the most impressed. I think she was well aware of how insulating the grip would be in cold weather.

Mission's Menace is an overall great little bow. It has every characteristic you would want in a youth bow – Adjustability, smooth draw, minimal noise, shock or vibration and a reasonable price tag.

## Mission Menace by Mathews

**Draw Weights:** 16 to 52 pounds depending on the selected draw length

**Draw Lengths:** 17 to 30 inches in whole sizes, single rotating module

**Axle-to-Axle Length:** 31 inches

**Brace Height:** 7.25 inches

**Mass Weight:** 2.92 pounds

**Let-off option:** 70 percent approximately

**Eccentrics:** Dual, 2CPW

**Advertised IBO Speed:** N/A

**Available finish:** Advantage Max-4

**Cable:** Zebra Hybrid

**String:** Zebra Hybrid

**Grip:** One-piece rubber composite

**Riser:** Aluminum extrusion

**Limbs:** Split

**Cable Guard:** Composite - straight

**Warranty:** Limited Lifetime

**MSRP:** \$249.00 - black riser and camo limbs or 269.99 for an all camo finish