

The High Road Forum Tests

If you wish to view the entire thread on The High Road forum regarding **independent testing** - go to the link below.

<http://www.thehighroad.org/archive/index.php/t-380198.html> (Photos and parts of this thread may be missing - this link may eventually expire)

John Shirley is an expert with weapons, and former NCO and finally CO in the US Army...at first the fine folks at The High Road forum were skeptical regarding the usefulness of the BeltSword Weapon System; including the power and lethality of the RazorSword. (Especially since this is the first viable weapon system to conceal a 32"-34" battle ready sword in a flexible linked steel containment system - inside a leather belt and fastened around a person's waist)

Below is a shortened version of the above thread regarding the BeltSword Weapon System testing; including the heavy RazorSword test with some additional photos not originally on The High Road forum.

Short version of the independent tests from some members of the High Road Forum

Here are a series of cuts on thick green bamboo; comparing a full size Paul Chen katana against the smaller and lighter RazorSwords. The independent tests were conducted by John Shirley from The High Road Forum. Please scroll all the way to the bottom and you will find one cut (two photos) made by the inventor Curtis W. Koehler. (34" by 0.062 thick - a heavyweight RazorSword) Since Curt Koehler is slightly larger than John; Curt may generate slightly more physical force and energy from his cut. (The strike from the 0.062 thick RazorSword; cut completely through the tough bamboo, one hand / one strike) This was a one handed grip/strike rather than two hands used by John Shirley with a full size Paul Chen katana; the Paul Chen katana is more than three times the weight and 10 inches longer than the RazorSword. The key to the cutting power is the immediate acceleration of the RazorSword to "terminal velocity" and the massive kinetic energy that it generates with only one hand.

Application of Physics written by Curtis W. Koehler

Kinetic Energy: If you double the weight of a sword you double the kinetic energy; however if you **double the speed of a sword** your increase the kinetic energy by a factor of **4-times**. Since each RazorSword is rather light, reaching maximum velocity is fast

and easy (as compared to a typical heavy battle ready sword); this allows for instant total release of the kinetic energy with massive cutting and bone crushing force. The RazorSword is much better balanced than any of the heavy battle ready swords; this also contributes to superior cutting power.

Resistance: In addition the thin blade (|) configuration of the RazorSword cuts more efficiently than thick (V -blade) configuration found in katanas and other typical battle ready swords. This is due to the corresponding reduction in the resistance with a thin blade; as compared to the increasing resistance from an expanding (V-blade). The same physics apply to the wing of an aircraft; Re: the thin wing of a super-sonic jet fighter as compared to a thick wing of a slower sub-sonic aircraft. Even as substances become more viscous or dense; as in water, flesh, bamboo, and wood...a thin blade will meet less resistance and thus have greater penetration power. (The thicker the blade the greater the resistance and proportionally less penetration given same amount of kinetic energy – however it should be noted that in certain substances such as a plastic sheet or a plastic bucket a V-blade will have an advantage by spreading the material as it cuts)

Note that the RazorSwords were sharpened for this test.

Below are excerpts from The High Road Forum as posted by John Shirley the person that conducted the independent testing. John is former US Military and served active duty/combat in Afghanistan as support for Special Forces; so he knows his weapons. In addition to his military background; John has had years of extensive martial arts training. **John Shirley's final opinion is that the RazorSword will cut about 75%**

Tests were conducted on July 24th and 25th 2008.

The following is quoted from The High Road Forum by John Shirley.

“This was tough stuff.”



”It is impossible to be completely scientific with testing like this, but an attempt was made to eliminate as many variables as possible. A single individual made all cuts; (the only exception is the bottom two photos in which the inventor Curtis W. Koehler demonstrated an Eskrima strike with a heavy weight RazorSword) an equal length of cloth and matting was used for each target; the same style cut, a traditional diagonal cut executed with both hands, was used on every strike. The longest side of each cut was measured.”

”The 32" .042 RazorSword made a 1 1/4" cut in the bamboo.”



”The 33.5" .064 RazorSword made a 1 1/2" cut in the bamboo.”



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”The Paul Chen katana made a 1 7/8” cut in the bamboo.”



JShirley

July 25, 2008, 01:38 PM

Guys, I have to get Curt back to the airport in time.

We spent a good bit of time today setting up bamboo, wrapped in a mat, covered by cloth, and then cutting it.

In a nutshell: the heavier, sharpened version of the razor sword really does provide 75% of the cutting capability of a full size Paul Chen katana. No bull.

Penetration in plywood is something else. In plywood, because of the denser material, lighter versions do even better than heavier, thicker versions. Since we will probably never be attacked by plywood, I don't think that a big deal.

Here is a picture of a one-handed strike into plywood with the unsharpened side of the .042" thick Razor Sword.*

http://john.photodelivery.dynalias.com/beltsword/content/bin/images/large/_DSF4661.jpg

*In the interests of full disclosure, I should note that Curt appears to be extremely strong for his size, so the fact that he could do this one-handed might be equal to two hands for many of you.

John

”To put this in perspective, a postal scale was used to weigh the swords. The small RazorSword weighs **10.4 oz.** The larger RazorSword weighs **14.5 oz.** The Paul Chen katana weighs **47.4 oz.**”



” Testing is *not* finished. Byron and I will continue to evaluate these for several weeks, and report back on satisfaction after that time. For now, I can make some conclusions.”

1. This is not a gimmick. It works.
2. These are strong. Use common sense, but these are **not** cheap Taiwanese stainless flea market ninja swords.
3. Practice with unsharpened versions before putting an edge on one (10 minutes with a grinder). *If you just want to practice with one, you may never need to put an edge on it.* I think you could still stop an aggressor with a temple strike or hit to a forearm with an unsharpened RS.
4. This is a bargain. Get 'em while they're cheap. I believe Curt is undercharging by about 40% currently. Don't expect something that looks like a work of art, but expect

something cool, completely unique, and fun to practice with. I would personally go for around a 32" blade."

The following information below is written by Curtis W. Koehler

Below are two photos demonstrating a one handed cut from the 0.062 thick heavy weight RazorSword (Above photo is the blue RazorSword in the middle of the photo that was used by Curtis Koehler below) It is important to note that the bamboo is held in place by a loose rope at the top and bottom. This allows the bamboo to move upon impact; which makes a cut much more difficult because a large portion of the energy is absorbed in the movement away from the cutting action. The speed of the RazorSword weapon is well suited for cutting moving targets. The "moving bamboo" simulates a moving human target; arm, hand, etc.





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Curtis Koehler above; the bamboo is a thick tough material that moves when struck; this was used in all the other cutting tests. Note the one handed clean cut made by the RazorSword. The bamboo simulates human bone. **Note: Even John with a two handed strike with the full size Paul Chen katana could not cut entirely through the thick bamboo...the RazorSword did...with only one hand. This test was conducted twice with the same results...a complete severing of the bamboo. (A one handed Eskrima Martial Arts strike)**

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June 1, 2009, 04:54 AM

#81

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I seen it at Blade. This Sword is far from a toy. It would cut in you half before you knew what happened. I am not usually impressed I have seen hundreds of thousands of knives. This was one of my favorites of Blade.

Jim Adams

www.blacktoeknives.com

Follow the dream, not the

competition.