



Congratulations on your purchase of the Wicked Edge Precision Knife Sharpener!

The great thing about this system is that it is highly customizable and will deliver consistent and repeatable knife sharpening results.

In this past year I have done a lot of experimenting and learning and here are some thoughts and observations that may help you.

Getting Started

One of the first questions is - what angle should reed knives be sharpened at?

One of the challenges is that our knives are not very wide (measured from spine to edge) in comparison with chef's and outdoorsmen's knives.

These angles sharpen most all my knives: 21 degrees on the left side and 23 degrees on the right side. (For sharpening the edge for left handed use - reverse these angles). This creates a slight bevel in the direction that we scrape. It takes a little mental gymnastics to see how this works since we are sharpening upside down. You may find other angles give you a result that works better for you. Experimenting is highly encouraged. Please share your results on the [Wicked Edge Double Reed Forum](#).

The depth tool that is supplied is designed for chef's and outdoorsman's knives. Most reed knives will not come anywhere close to fitting onto the vice so deeply. Place the knife far enough into the vice to get a good grip - but no farther. This is around 1/4 inch (6mm). If the knife fits too far into the sharpener (vice), you can scrape the top of the vice with the stones.

The blade should face straight up and be perpendicular to the base.

- Tighten the top screw to get a good hold.
- Then, tighten the bottom screw to clamp the knife in.

Wicked Edge recommends only using the supplied allen wrench tool.

Using a regular allen wrench provides too much torque and can damage the vice.

Knives that tilt in the vice

Some knives will tilt to one side due to the shape of the spine of the knife no matter how careful you are or how tightly you clamp the knife in.

Here are two solutions:

- 1) place a quarter inch of double sided foam tape on the inside of the vice.
 - the vice can be completely unscrewed. This makes placing the tape easy.
 - place the knife through the vice and then work the knife up into place.
 - the tape can be easily removed for knives that don't need it.

- 2) another option is to lay the knife on a diamond stone and grind a little bevel (flat spot) into the spine. You do not have to grind both the spine and the edge, just the spine. The bevel creates a flat spot which makes it conform better to the vice.

Creating A Burr

The first and **most** important step is to create a noticeable burr on each side of the knife blade.

The diamond stones will be rougher at first until they break in. Be careful, especially with the 100 grit stone as it is possible to create chatter in your knife.

Another caution: some knives are not hardened properly and the edge with chatter badly no matter what you do. This is particularly true with inexpensive knives with a squared spine.

There is an extensive discussion about these knives on the [Wicked Edge Double Reed Forum](#). (Click on the link)

- start with your lowest grit stone (or a higher grit if the knife is already quite sharp)
- using a scrubbing motion (i.e. up and down) accomplishes this quickly
- if the knife is rounded (you can feel this and sometimes even see this) you will have to grind away the rounding.
 - (The good news is that once this is done, you won't have to do it again.)
- start on the left side (or right side if you are preparing the knife for left handed use)
- keep scrubbing until you feel a noticeable burr along the length of the knife. You will be able to feel the burr with your finger or fingernail
- once the burr is created on one side - move to the other side
- for the sake of safety, hold the paddles as low as possible. This keeps your fingers away from the edge of the knife

[Burr creation video](#) (click on the link)

Sharpening

- once you have created the burr you begin the sharpening process
- start at one end of the blade with the stone in the lowest position
- move in a forward and upward sweeping motion along the length of the blade
- as you gain experience you will become faster at this
- if you find yourself bumping the paddles together on the reverse stroke, try arcing one side away from the blade, this should solve this problem
- **do not** go over the edge of the knife if you go from back to front, just go to the edge of the knife
- do 20-25 strokes with each stone
- move progressively through all the stones up to your highest stone, depending on which stones you have
- again, for the sake of safety, hold the paddles as low as possible. This keeps your fingers away from the edge of the knife

[Sharpening Video](#) (click on the link)

Stropping

IMPORTANT: follow the instruction for applying the diamond paste on the strops - you only need just a little bit of paste on the strops, otherwise it is wasted

- the paste lasts for a long time, I sharpen quite a bit and I find the paste lasts for several months
- the strops are quite delicate - use great care when using them, they damage easily
- I strop from front to back - this will help you to remember to always move in an upward motion
- stopping back to front is also possible
- **make sure to move in a constant upward motion when you strop.**
If you move downward or in a straight motion at all - you will knick or cut the strops
- [stropping](#) is a new concept for me, I think of it as 'waxing' the edge
- the difference stropping makes is huge

[Stropping Video](#) (click on the link)

Setting the burr

- generally I find that after sharpening that I still have to set the burr after sharpening
- I use one of three devices to accomplish this:
 - the Jende tool
 - the sharpening rod sold by Roger Miller
 - [Burnishing Steel \(Rod\)](#) (click on the link)
 - a kitchen sharpening rod
- once you start scraping you will need to reset the burr frequently
- I find that once the knife is sharpened it will last for the day
- if you don't have the ceramic stones - you may want to touch up using the 1000 grit stone
- this almost always resets the edge, occasionally I will have to use the 800 or 1000 grit diamond stone to touch up the edge
- **CAUTION:** do not use a sharpening rod with grooves, these are very coarse and will ruin your edge!

Touching up

- the great thing about using this system is that once you have established an edge, you will not need to repeat the entire process
- go back to your highest stones - resharpen the edge and then strop

Chosera Water Stones Usage

The Chosera Water Stones are used wet. Use a small container to soak the stones (a small rectangular container works well). Add *just* enough water - about a quarter inch - to soak the stones. Soak each side for 5-10 minutes. Use a small spray bottle to spray the top of the stones as the bottom side is soaking.

The Water Stones are thicker than the diamond stones. This means that the angles you choose for the diamonds stones on the angle bar will not be the same for the Water Stones. To get the same sharpening angle, you will need to check the precise angle that the diamond stones are sharpening at.

You can use an [angle cube](#) or an angle app on an iPhone or Android phone. I use a free iPhone App called [Plumb Bob 5th](#).

1. Calibrate your Angle Cube or app by setting it on the base and zeroing out the App/ Angle Cube.

2. Place the diamond stone on the angle arm as you do when sharpening. Set the iPhone/Angle Cube on the left diamond and measure the angle on the left stone. Record this angle.

3. Repeat this procedure for the right side.

4. Place the water stone on left arm and measure the angle. Loosen the screw on the angle arm and move it out until you match the angle of the diamond stone. A measurement within a degree is close enough.

5. Repeat this step for the right side.

Once you have determined the angle for the water stones - you should not have to repeat this step, it should not change. Depending on the thickness of the water stone - you will probably find that the measurements for the water stones is 1-3 degrees more than the diamond stones.

Caution - be careful not to bump the water stones together as you sharpen as they are fragile.

Before you use the water stones, rub the two stones together to create a 'slurry'. This will help to smooth the sharpening action.

Also, keep your spray bottle handy, and spritz the stones if when they begin to dry.

Using first the coarser grit stones, do 10-20 strokes, then I flip the stones (top to bottom) and do 10-20 strokes on the other end of the same stone (still at 2000 grit).

Switch to the 'fine' side. Continue on to 5000/10000 grit, if you have them.

After you finish sharpening you will need to 'lap' the stones - rub them together under running cold water. Get all the metal off the stones. This also flattens out the wear of the stones. Water stones are soft and wear quickly. It is also possible to rub the stone with your finger and some water to get a lot of the metal out of the stone. A good way to do this is under running water at the sink.

You may need to 'lap' the water stones occasionally on a diamond stone to flatten out the wear. The 600 grit stone is good for this.

Here is a link to videos on using and lapping the Chosera:

[Jende Industries WEPS Videos](#)

Before you strop - **remember** to reset the angles to your original settings and strop the knife.

Rough Work Knife

- to create a knife edge for rough work, I use an older knife and sharpen it to 600 grit and then strop as usual
- this creates a great edge for scraping bark and starting a reed

Because this system is so precise, you will likely find that you are not wearing your knives down as is the case with most other sharpening systems

Rigotti knives

There has been an issue with sharpening Rigotti knives (sold under a variety of names). They have a squared spine that is ideal for the Wicked Edge Sharpener but they have a tendency to chatter when sharpened in the normal fashion with diamond stones. You may have other knives that have this issue.

Here are two solutions that solve this problem.

- the Chosera Water Stones produce a superior edge and do not chatter. There is quite a bit of discussion about this on the [Wicked Edge Double Reed Forum](#).
- it is possible to sharpen these knives with diamond stones using a variation of the scrubbing technique:
 - create a burr using the scrubbing technique described above
 - to sharpen, begin on the left side at the heel of the knife using a scrubbing motion (i.e. up and down) and move the knife forward from heel to tip
 - when you have enough room, add the stone on the right side and simultaneously sharpen on both sides moving from the heel to the tip
 - continue the progression through your finest stones
 - ceramic stones should be used in the regular sweeping motion
 - strop as usual using the sweeping motion

Storing your stones

There is a reasonably priced [storage case](#) from Harbor Freight that works quite well. It keeps the stones safe and organized and makes for easy transportation.

This all seems complicated at first - but it will come together pretty quickly.

I am very excited to see more oboists using this system. The collective experience of wisdom that we have gained from a variety of backgrounds and traditions brings a wealth of experience that we can all benefit from.

There is a wealth of information available on the Wicked Edge website. Here are the links to Wicked Edge website forums: [Wicked Edge Forum](#) including a [Double Reed Forum](#). (Click on the links to access forums).

The folks at Wicked Edge have been very helpful and responsive answering my questions. They will be glad to help you too. Please let me know what you learn.

Reed knives are something new to them. Last year I had the opportunity to visit Clay Allison at the Wicked Edge headquarters. He was quite fascinated to learn about our knives and had no idea that the Double Reed community was so involved with knives and knife sharpening. Clay sharpened an otherwise unusable Vitry clone for me. When he was done - it was as sharp as my Jende!

Please feel free to contact me with your questions and your observations. If you have specific issues, we can always do a Skype Video Conference.

I am always happy to help.

Happy reed making,

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