Reed Seasoning and Adjusting

I am frequently surprised how many fine players say they only get 20% performance quality reeds out of a box. Many of them bemoan how terrible reeds are compared to their early years playing. Frankly, I feel there are more great reeds manufactured than ever before! It could be that players have gotten fussier over their musical results as they gain experience, but have never invested in developing reed seasoning and adjustment skills. You should get at least 80% high quality performance reeds out of a box. That takes up to 10% of your practice time, but is ***well worth it.*** It just makes achieving musicality easier! All of my students are good at adjusting reeds within their first year of playing. There is some art to it, but it is mostly science. Their music directors are frequently astonished to see these youngsters calmly making reed adjustments during rehearsals, a sign that all too few students are being taught to maximize the potential of their equipment and their ability to achieve nuanced musicality with ease.

Equipment

1. Glass plate, 3/8th" thick. 3 3/4" X 7". The best place to get it is at a glass repair shop, auto glass just fine. They will usually give it to you if you are nice to them and tell them you will give them your auto glass and/or home glass business. Make sure they polish the edges so you can't cut yourself! If you want something really flat and really heavy, buy the *Granite Surface Plate, Item 88N85.01* from Lee Valley Hardware.

http://www.leevalley.com/en/wood/page.aspx?p=32526&

2. Reed Geek Available at good music retail shops or directly from *http://www.reedgeek.com* for flattening the reed table and all adjustments to the surface of the reed. This relatively new product is revolutionary and indispensable. There are also fine tutorials available at the Reedgeek site.

3. Sandpaper. 600 grit from any hardware store. The very best is 1500, 3200 and 6000 *Micromesh*, available by mail order from the following sites.

http://www.mohawk-finishing.com/catalog_browse_tech.asp?ictnbr=239

https://www.internationalviolin.com/Shop/micro-mesh-sandpaper-steel-wool/micro-mesh-sheets-pads

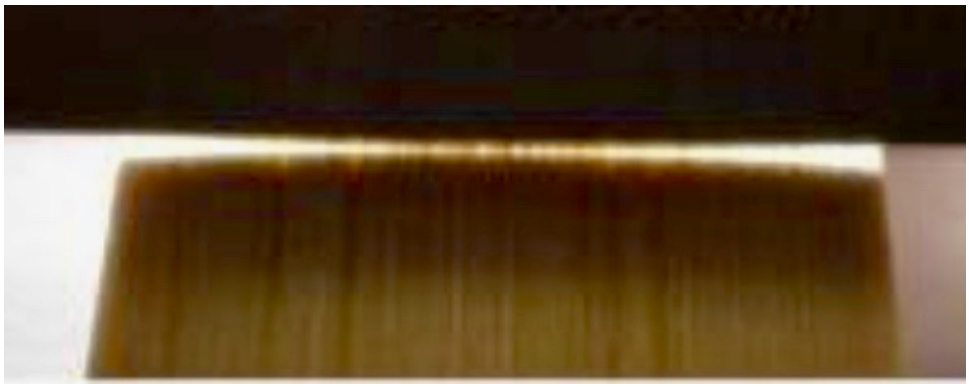
4. Reed Trimmer for Each Size of Reed The Cordier model is best known standard clipper, but you need to try them out to ensure they cut cleanly, and they need to be replaced every few years. Vandoren makes superb trimmers designed to exactly duplicate their own tip cutting for specific models of their alto saxophone and soprano clarinet reeds.

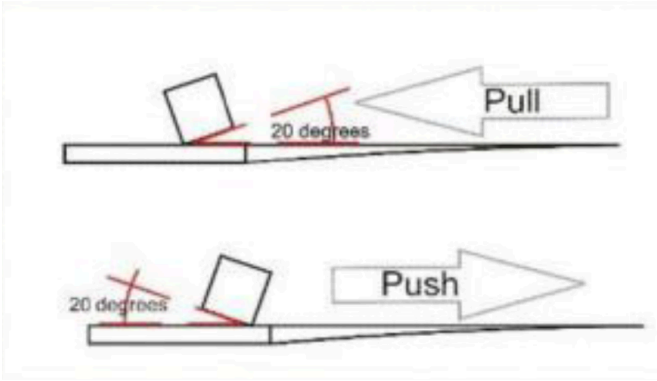
Reed Care and Seasoning.

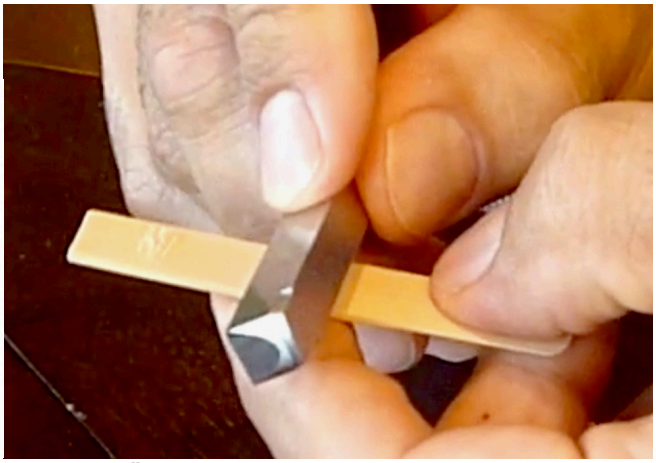
Purchase reeds on the slightly hard side and adjust them from there, rather than clipping, which can affect the balance. In my opinion, all adjusting works better on "thick blank" reeds with conical profiles. There is just more "meat" to work with. With extremely thick blank reeds bought a little on the hard side, this comes very close to actually making your own reeds. It is a little more work than adjusting standard blank reeds but produces fantastic results. The most conical reed made of premium seasoned cane that is the thickest blank at heel, heart and tip is the Vandoren V21.

Soak new reeds a few minutes in water. I don't recommend wetting reeds in the mouth. Saliva exists to break down organic material…which is exactly what cane is! I use the same product as most double reed players…a cup that clips to my music stand, available from Forrest Double Reed Supply or Amazon. They are available pressure clipped or magnetically attached.

Play the new reeds for 5 minutes, not above mezzo forte. A terrific time to work on your long tones! Dry out the table, and then check it for for warping by placing Reedeek on the back at an angle and moving it slowly up and down the length of the table looking between the Reedgeek and the table at a bright light. Many reeds are convex or concave on the back and will not seal to the mouthpiece table. The larger the reed, the more of them are warped…. from about 25% of soprano clarinet reeds to over 50% of bass clarinet, tenor sax or baritone sax reeds. Here is a picture of a reed with convex warpage. Scrape as in the diagram and picture to flatten.

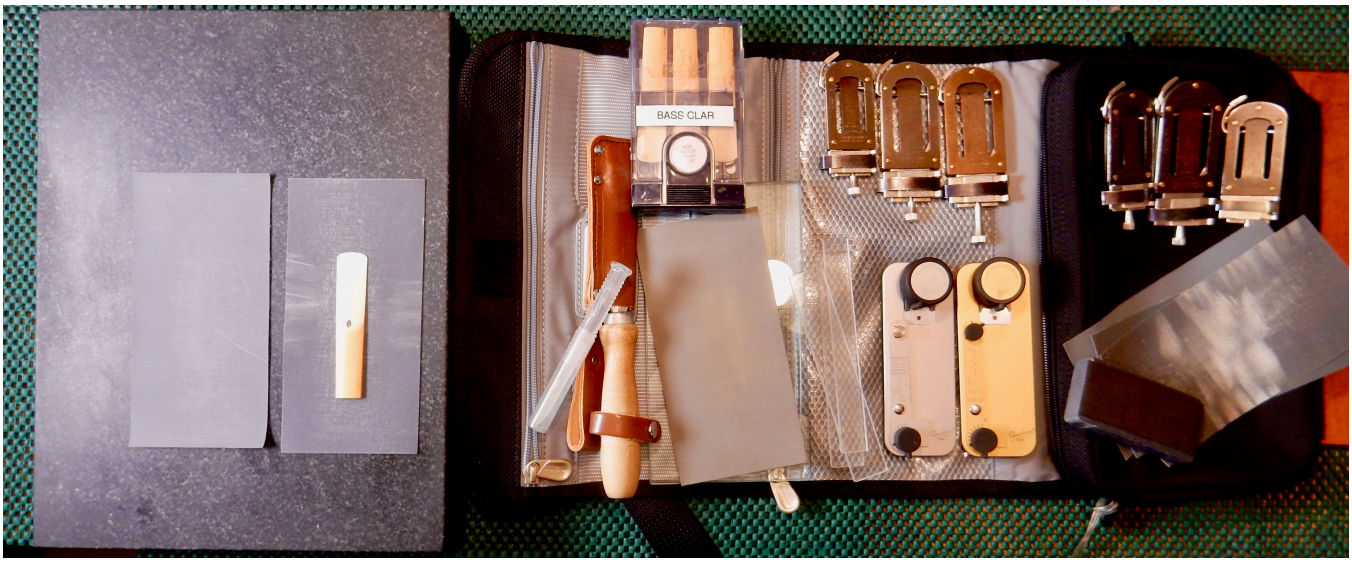




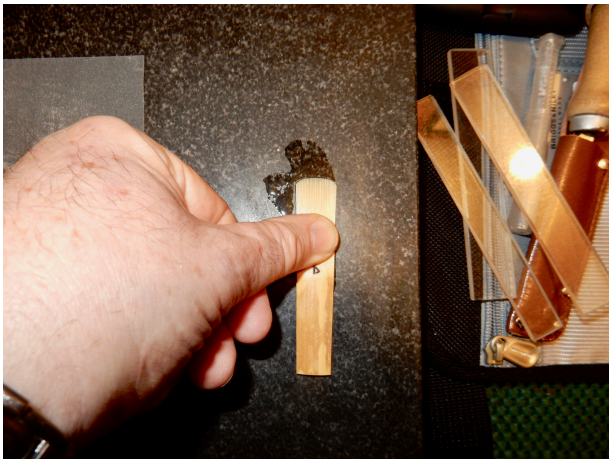


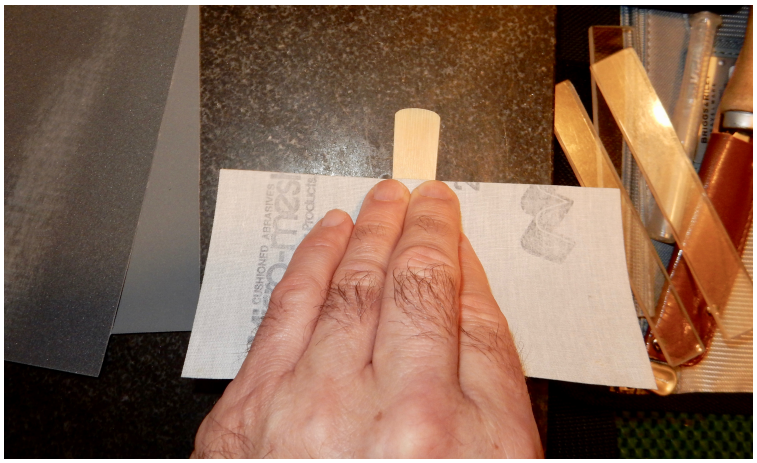
You can be quite aggressive! Note how much "reed dust" has accumulated in the picture following the diagram.

Next, the initial sanding. I place the sandpaper on a block of granite that is flat to within one micron. A 3/8" thick 3 ¾" X 7" glass plate works just fine, and I have one of those in my gig bag, along with sandpaper, reed clippers and a Reedgeek. I also pack a Ridenour sanding block, a Vandoren Reedstick, a fine Japanese reed knife, plexiglass reed supports for scraping and every size of reed clipper.

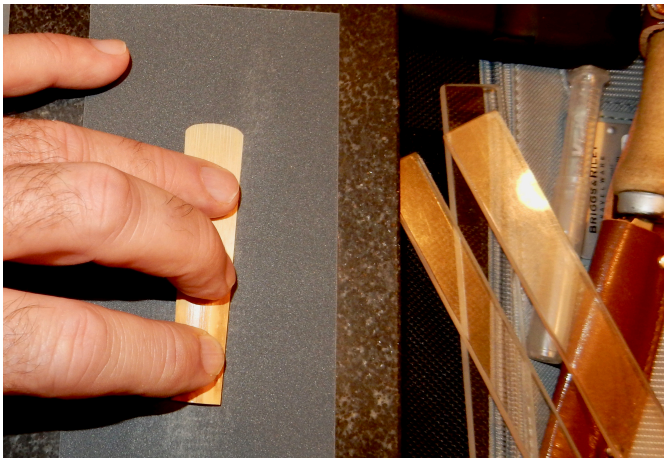


Now place the reed table down directly on the granite or glass and press much of the water out with your thumb, pushing from the stock up to the tip. Sand the face of the reed extremely lightly too, just for the comfort of very smooth cane on the bottom lip—not enough to change the acoustics.





Then sand the table of the reeds over 3200 Micromesh, followed by 6000 Micromesh sandpaper. This is an abrasive that was developed for polishing commercial aircraft windows—they go up to 12,000, which is too fine for reed work but excellent for polishing mouthpieces after re-facing. 600 grit commercial wet/dry sandpaper from a hardware store works well, but I'm a fanatic. If you finish with 6000 Micromesh the table of your reed will be as smooth as glass.



Most results come from the first sanding, but each time the reed is soaked, just a little more fiber comes up in the table, so repeat this process (except for the “front” sanding) the next two times you season the reed. It is now about 80% seasoned and just needs to be played a few more days to be performance ready. It takes about a week in all for the reed to have a polished ringing sound.

This gives an incredibly smooth reed table that seats well on the mouthpiece and seals the reed to the rails and tip of the mouthpiece when vibrating, improving articulation and tone. I estimate about 10% better response and smoothness. Pressing out excess moisture with your thumb on granite or glass prolongs the life of the reed as well as adding more “polish” to the sound. Moisten the reeds for playing by soaking in water, not saliva. 1-2 minutes for clarinet up to about 3-4 minutes for a Baritone sax reed. Once the seasoning is complete, you can leave the reeds in water for quite some time with no fear of them becoming “water-logged.”

Reeds must be kept at “playing humidity.” I used to drill very small holes in the sides of my wooden reed cases and store them in high end cigar humidors at 70% humidity, but now I use Vandoren Hygro Reed Cases. They hold reeds in great condition with a sponge that provides humidity when moistened and are the ***only*** reed case that leaves the table of reed quite open to humidified air, and ***never develop mold*** because there are holes that allow air movement.

Some players place a *Humidipak* or a *Humistat Humidifier* (pictured above) in a zip lock bag with the reeds held on glass with rubber bands or in commercial reed holders. That works just fine (as long as the commercial reed holders have holes drilled in the sides for air movement), but I find the Vandoren reed cases more convenient, since I have 12 sets of reeds on the go (jazz and classical setups for SATB Saxophones, plus A/Bb/C, D/Eb, Alto and Bass Clarinets.) That's 12 reed cases with an inventory in rotation of 72 performance ready reeds. That's too many zip lock bags!

When the reeds are 2-3 weeks old, they are at their absolute best, if played on approximately an hour per day. Since I "double" so much, most of my reeds do not get more play than that. At about 3-4 weeks, the table gets a little rough and "pulpy" and may require one more sanding. If the table feels rough at any point, I just give them about 3 passes over 6000 grit Micromesh. At about 4-5 weeks, the reeds are still comfy and expressive, but can start to get "flabby." At this point, a great reed can sometimes be "brought back" by clipping the tip by about ¼ mm. This doesn't always work, but is worth a try, and the reed can be improved a bit in response after this by scraping it extremely lightly from 1 mm below the tip up to the beginning of the heart with the Reedgeek. However, this is the beginning of the end for the reed, and they are not suitable for performance, only practice. Another week or so and they are a goner.

Reed Adjusting

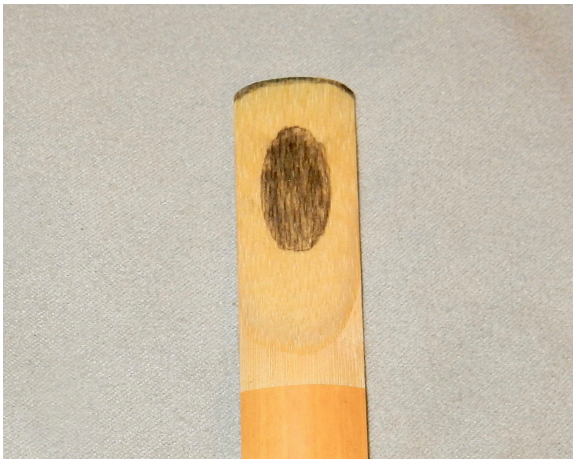
Most of this is done over the first three days of seasoning. Then the reed is ready for its final polishing and adjusting when it goes into performance rotation.

1. **Warped Table:** We have to repeat this every few days during the seasoning process and check weekly when the reed is in playing rotation. The reed will keep changing with usage and weather, so we are not done with this after the initial seasoning. The following balancing also continues from time to time, usually very slightly, during the reed's performance life.

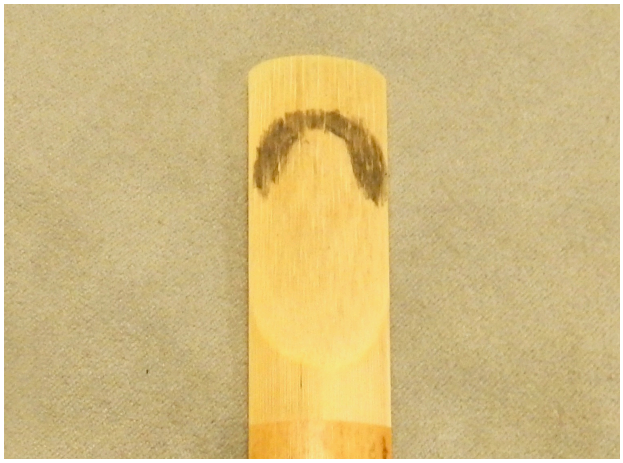
2. **Side to Side Balance:** This is the single most common issue with reeds….75% of reeds need balancing and if you are not already doing this, it will change your life. To test for balance issues, place the reed on the mouthpiece on the instrument. Take a little less mouthpiece than normal into your embouchure and turn the mouthpiece clockwise about 30 degrees, so that your embouchure only controls the right side, with the left side of the reed free. This will dampen the right side of the reed so you can test the left side. Blow an open C# (sax) or G (clarinet.) Blow a good solid *sfz ff* ***without*** tonguing, followed by a long diminuendo al niente. Do the same thing on the other side, rotating the mouthpiece so that the right side is free. The initial resistance and the progressive lack of response as you diminuendo will inform you which side is "stuffier." If the "free" side (L or R) seems stuffy compared to the other, some cane should be removed from that side. Scrape around the heart and up to the center of the tip of the stuffier side.

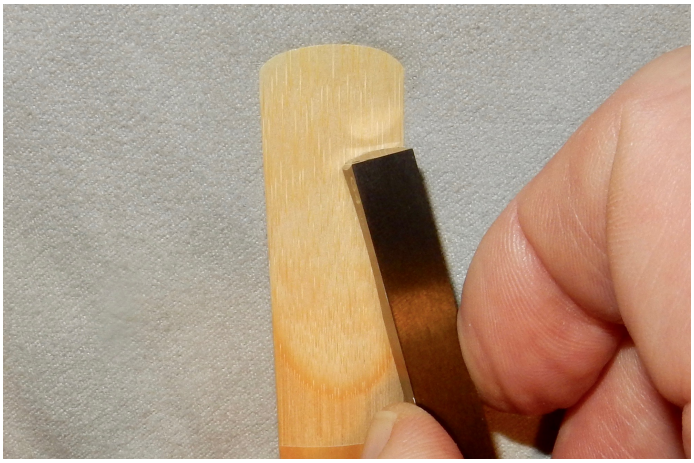
Here is the area to scrape if the right side is more resistant, and how to angle the Reedgeek.

Note we are avoiding the center or "heart" of the reed, as well as the last millimeter of the tip. Leave these areas alone to ensure full resonance as well as clear articulation.



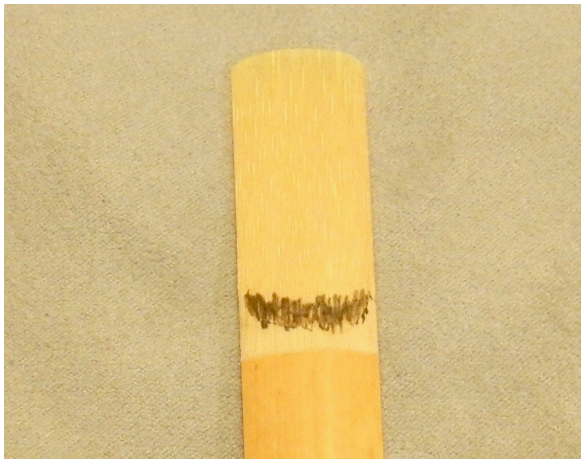
3. **Middle register response areas.**



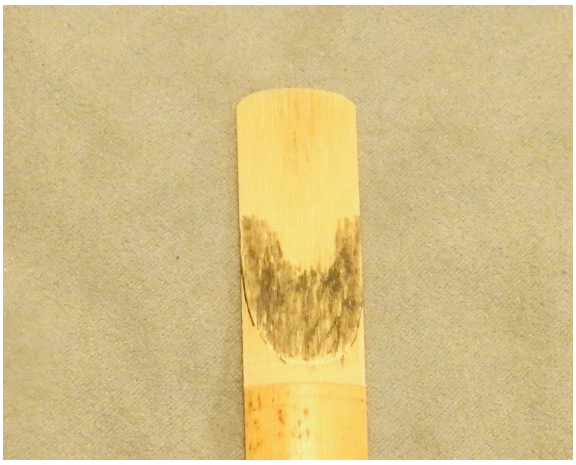


Usually these areas are adjusted pretty well by the time we have adjusted the side to side balance. However, if a reed is feels too resistant in all registers, these areas will get scraped along with all the rest below.

4. Low End Response: Tongue repetitive staccato notes on the bottom 4 notes of the instrument. See how responsive they are. If they are dull, stuffy or just do not resonate nicely, scrape the bottom 1/8" to ½" of the reed just above the bark

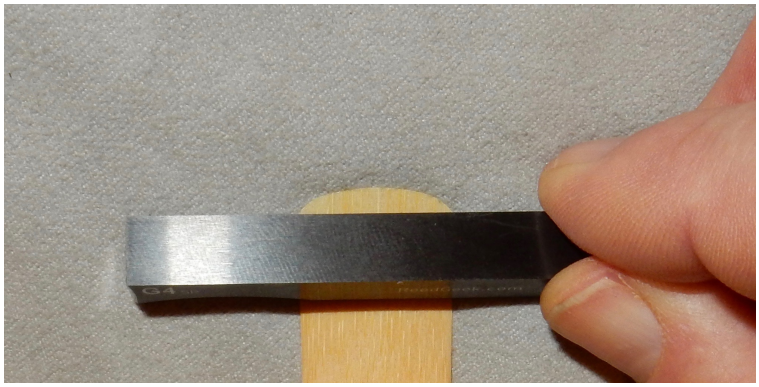


The less responsive the notes are as you move up from the bottom notes, the higher you have to scrape, but just up to the center. Scraping all the way from the bark up to the center point of the reed improves response and resonance over the entire instrument. Note we are still avoiding the heart of the reed.

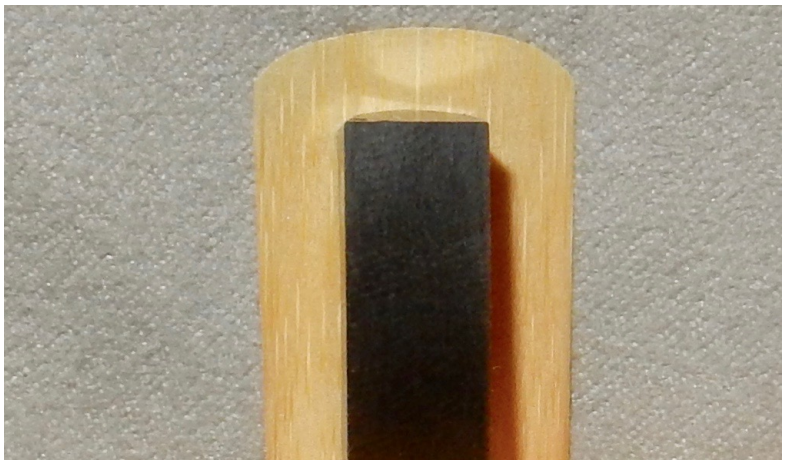


5. High End Response and Ease of Register Change: Tongue pp repetitively on A above the staff and higher to check articulation response. At the same time check response to register changes by slurring up and down from C below the staff, to G above the staff and up to altissimo high E on clarinet. These are all the same fingerings except for the thumb vent key and the first finger half-hole venting for the high E, so it is easy to test the response through the registers this way. On saxophone, slur between D below the staff, D in the middle of the staff and then high D with the palm key to test register changes. These two tests tell you if you need to work on the tip of the reed in the centre from 1 mm from the very tip, down to 3 mm below the tip.

To adjust for ease of articulation and register changes, you can scrape this area with the side of the Reedgeek.



However, the “bullnose” of the Reedgeek is the sharpest and most precise part of the tool, so it can be ideal for this purpose for fine tuning.



That is all there is to it! If you are willing to commit to this, within a few weeks you will triple or quadruple your percentage of performance reeds, at the expense of about 10% of your practice time. Even better, your standard of what a performance reed can do for your tone and articulation will increase exponentially! At first, you will ruin the odd reed, but that’s how you learn, and they won’t have been performance reeds anyway!