Guide to Double Reed Care

Table of Contents

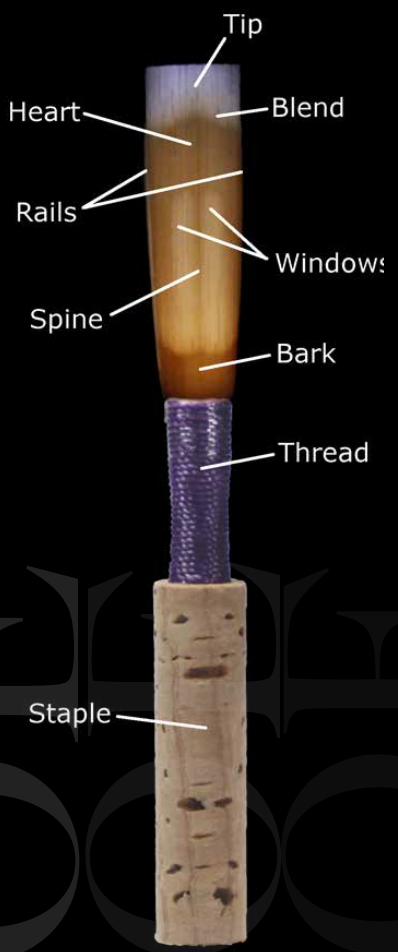
Here to Serve

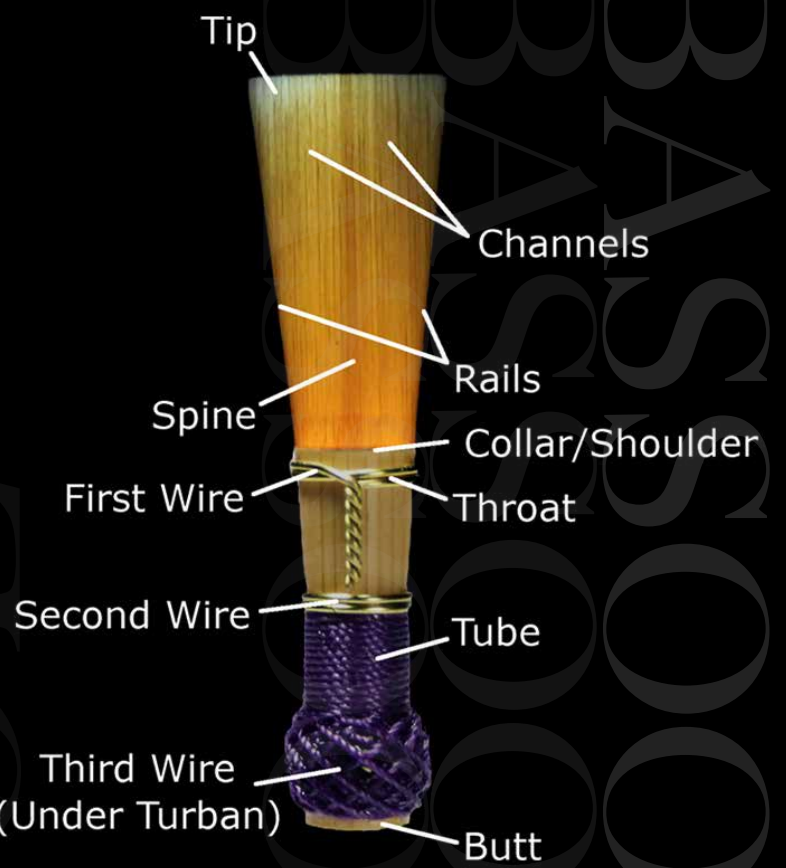
- **Players** - Everything we do is intended to help the players through early learning with reeds that play with ease, helping them build a solid foundation, then advanced reeds to meet their needs as they grow in their playing. We offer resources such as this guide as well as videos that will help players get the best life and performance out of their reeds through proper care and understanding basic troubleshooting.

- **Parents** – the unsung heroes behind every student. They drive their kids to lessons, listen to their playing as it improves, and are generally the ones buying the reeds. We want parents to have faith in us to provide the best reeds for their children. Our goal is to provide a cost-effective product so they feel comfortable buying our reeds time after time, and to educate their children on how to best care for their reeds, so they can get better life out of their reeds.

- **Band Directors** - our critical focus is to help band directors more easily develop a double reed program at their school, or, nurture an existing one. It may have been a long stretch of time from double reed tech class to actually teaching the instrument, and we do not want the worry of whether or not students will have working reeds. All our reeds offer the consistency, quality, and reliability your students need, which will make for better lessons and rehearsals. This guide is designed as a comprehensive reference for band directors for a successful reed experience for the students.

Double Reed Anatomy





Essential Reed Tools

Here is a comprehensive list of tools and supplies essential for every band room. Before your students or their parents purchase these tools, it is wise to demonstrate them so they understand how to use them.

- ***Cutting Blocks, or billots*** are essential if you plan to use a razor blade for clipping the tip. They are made of Grenadilla wood which provides a solid base to clip. Reed cutters are available as an alternative to using razor blades.

- ***Distilled Water*** will help prolong the life of a reed when soaking. It does not have the extra fluoride and sediment that tap water has. Those elements can rapidly break down a reed, and cause problems with tone holes and pads on the instruments.

- ***Flat Oboe Plaques*** serve as a stabilizer so that one may easily scrape the tip of the reed. Arrow Plaques serve as good bassoon reed stabilizers so that one may easily scrape the tip of the reed.

- ***Isopropyl Alcohol*** is a very reliable sanitizing base that will help keep your student's reeds free from bacteria.

- ***Knives*** are essential for oboe and bassoon reed making. There are two kinds of knives that are widely accepted to use, the double-hollow ground or beveled.

Reed Tools Continued

◊ ***The ReedGeek®*** is a knife alternative for scraping on both oboe and bassoon reeds. It will never get dull and is safe to the touch.

◊ ***Mandrels*** make it easy to hold bassoon reeds in your hand, and safer to do work on a reed.

◊ ***Metal Rulers (in millimeters)*** are essential for all band directors and students. It is best to use a thin metal ruler with accurate marks.

◊ ***Razor Blades*** are used to clip the tips of oboe reeds. It is best to have a small medical grade waste container to dispose of used razor blades. Reed guillotines available from double reed tool companies if you prefer to avoid razor blades. In your search engine, type "Oboe (or Bassoon) reed guillotine."

◊ ***Sharpening Stones*** are essential for those who choose to use a knife. There are a few different types of stones that are accepted to use; a diamond stone, whetstone, and Arkansas stone.

◊ ***Soaker Cups*** are essential for every student. Our Soaker Cup is available with a clip for either folding or traditional music stands. These help to avoid disruptive spills.

◊ ***Fine Grit Sandpaper (600-grit)*** is good to use for bassoon reeds instead of scraping with a knife or ReedGeek® will help smooth broken corners and help fix articulation response on a reed. Sandpaper may also be used to buff the blades as the fibers begin to rise and get rough from many cycles of soaking and drying.

◊ ***Pliers*** are extremely important for rounding and flattening the throat of the bassoon reed via the brass wires. This changes tone, pitch, and adjusts the tip opening as necessary for good response.

A special thanks to RDG Woodwinds for the use of their tool photos. For more information on the tools RDG stocks, go to www.rdgwoodwinds.com.

Reed Tools Continued

Beginner Oboe Reed Case (101CS)

- ◊ Perfect for entry-level oboe students
- ◊ Holds 12 oboe reeds
- ◊ Foam strip secures reeds in place
- ◊ Two holes for proper venting and better performing reeds

Beginner Bassoon Reed Case (201CS)

- ◊ Perfect for entry-level bassoon students
- ◊ Holds 6 bassoon reeds
- ◊ Foam strip secures reeds in place
- ◊ Two holes for proper venting and better performing reeds

Reed Q's Answered

Professional reed makers are able to diagnose problems that relate to critical reed issues like gouge and profile thickness, shape, tube size, and many others. While these are legitimate topics to discuss with bassoonists who make their own reeds from tube cane, they are frequently not within the control of a player who is using a reed made by another player or by a reed manufacturer.

The questions below are common, and the answers are intended for those players who desire to get the best life and performance out of their manufactured reeds, and are tailored to be used by even the earliest beginner.

Q. Should I use the Student reed, or the Artist reed?

A. We recommend that once a player has developed muscular strength in the embouchure, where they are no longer biting down on the reed, that they advance to the artist reed. The student reeds are developed for the early learner and not refined for the discerning player.

Q. What strength reed should I use?

A. The best performing reeds under normal conditions are medium strength. They tend to give the player the best tone quality and the longest life, with minimal adjustment.

Medium soft reeds are good for early learners because they respond with little to no embouchure developed. As players begin to develop their embouchure, they should advance to reeds that have a little more structure and support in the cane to give them better range.

Medium hard reeds are typically designed for maximum durability and greater resistance: a player would adjust the reed to their own liking. Players do not typically play on a medium hard reed without quite a bit of personal tailoring and adjustment.

It is good to keep in mind that at sea level a somewhat sturdier reed may be necessary to achieve a full, rich sound. That same reed played at 2000+ feet elevation might prove to be too "hard" to allow for quick response and soft dynamics.

Q&A Continued

Q. What should I look for when buying a reed at a music store?

A. If the retailer will let you open the case, you will be able to make the best decision. If not, you may be able to see most items well enough to make an educated choice.

For **Bassoon**, look for visible cracks. Look for a round tube end. Look for a smooth appearance of the surface of the cane. Look at the tip opening. If it is too large (blades more than 1.5 mm apart at the center), this can be dealt with easily, and should be okay to purchase. If the reed tip is too closed, it may be possible to stabilize the reed by adjusting the first wire, but the life of the reed may not be as long as one with a good tip opening.

For **Oboe**, look at the tip opening. If it is too large, that can be dealt with easily, and should be okay to purchase. If the reed is too closed, you will not get much life out of the reed, though will likely open up when soaked. If you can see the scrape, look to see if the spine is centered on the reed. There are some manufacturers that are not careful to make sure of this, and the reed may play, but will likely be very imbalanced and not have a great life.

Q. What should the tip opening look like?

A. For **Bassoon**, the tip opening should be 1.5mm at the center of the tip, and the sides should come together symmetrically from side to side and from top to bottom. Often poorer-performing reeds will have tips that have one blade flat while the other is curved, or one side of the tip is more closed than the other. Both of these problems result in a lopsided tip appearance. These reeds can be adjusted somewhat to create vibration, but if you have the opportunity to avoid them, you should.

For **Oboe**, the tip opening should be around 1mm at the center of the tip. The tip should be even on each side, so that one side looks like a mirror image of the other, not one flat side and the other curved.

Q&A Continued

Q. What should I do with my brand-new bassoon reed to break it in properly?

A. With the reed completely dry, buff the reed blade with 400 or 600 grit sandpaper very lightly and evenly across the reed blade back, sides, and corners, supporting the delicate corners with your fingertip. Avoid the heart, which is a circle approximately 8mm wide in the center of the reed, 2-3mm down from the tip.

Buff very lightly the first 4-5 times you play your new reed. With the reed still dry put a "chisel tip" on the tip of the reed by using a small piece of sandpaper (600 grit) and the reed at about a 20-degree angle. Lightly press the reed blade so the very tip is evenly distributed on the sandpaper, and gently drag the reed backwards approximately one inch down the sandpaper 2-3 times on each side of the reed. This will dramatically improve the response whenever needed.

Lastly, soak the reed by dipping the blade in the water, then placing the tube end of the reed in fresh water in your soaker cup. The time to soak a reed depends upon your relative humidity: high humidity areas will need less soaking, while arid climates will need more soaking. Generally speaking, the time necessary will be plus or minus 90 seconds.

After the reed is soaked, check to make sure that the tip opening is approximately 1.5mm in the center. Adjust with your fingers if necessary: squeeze the top and bottom of the first wire to close it down, or the sides of the first wire to open it up. *Always watch the tip opening as you adjust it, so that you do not apply so much pressure that the reed splits.

Q. What should I store my reeds in?

A. Reeds should be stored in a well-ventilated, hard container. Typically, the case the reed come in is the worst possible option because they typically are not vented. Many companies offer hard plastic reed cases for purchase, however, even a mint container like Altoids would work if two or more vent holes are made. Reeds need air flow to dry off and to prevent bacteria or fungal growth. After play, it is always best to let the reeds dry in open air if possible, or to allow them to dry in open air at the earliest possible opportunity.

Q&A Continued

Q. How can I get the longest life out of my reed?

A. Reeds can last much longer than they typically do for many players. We have found that if you soak, rinse, and dry the reed properly, players can get a reed to last up to four times longer than a reed dampened only in the mouth and put straight back into the reed case at the end of play. We recommend distilled water for your soaker cup. If not available, use fresh water.

1) Soak the reed for approximately 90 seconds in the water, not the mouth, before playing. Oversoaking can reduce the endurance of the cane. Under-soaking can cause the reed to crack when you play, and creates resistance. We strongly recommend using a soaker cup and a holder, to attach the soaker cup securely to the post of your music stand.

2) When play is finished, rinse the reed in clean water (running water from a fountain or sink is best) to remove saliva. If running water is not available, at least dip your reed back into your fresh soaking water. Remember, the reed is an organic substance, and saliva is a pre-digestion agent, so as long as saliva is wet on the cane, it will be breaking it down. This is why it is so important that the only saliva on the reed is from playing, and not from soaking it to prepare for play.

3) Gently wipe excess water from the reed blades and allow to dry completely. Your reeds will last much longer if you leave your reed case open to the air if at all possible.

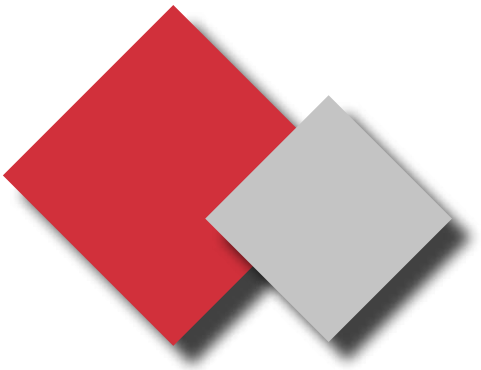
Q. How else can I best clean and care for my reed?

A. The best care of the reed comes from recognizing that saliva quickly deteriorates the reed. If at all possible, brush your teeth before playing. At the very least rinse your mouth before rehearsal or practice, as saliva and food particles will dramatically shorten the durability of your reed. Similar to the tips in "How can I get the longest life out of my reed," soaking in distilled or fresh water, not in the mouth, and rinsing your reed after use are both critical. Clean your reed regularly, especially if recovering from illness, by dipping both ends of the reed in 70% isopropyl alcohol and then rinsing it thoroughly with fresh water. A small pipe cleaner run through the reed from the bottom, and out the tip, can also help keep the reed clean and performing at its best.

Q&A Continued

Q. How do I know when it is time to get a new reed?

A. **Bassoon reeds** that are well taken care of can last for quite a long time. Taking care of them well is addressed above. The life of a bassoon reed can vary tremendously based on care, total playing time, and the resilience of the cane of that particular reed, so answering this question with a specific amount of time, i.e. one month, six months, would be impossible to do accurately.



The signs of reed aging are:

- discoloration of the blade cane
- thread unravelling
- sides slipping and coming apart
- playing too sharp
- becoming more resistant
- cracking, and more

There are ways to adjust some of these problems (see trouble-shooting questions below), but when multiple signs of aging appear, you should purchase a new reed.

Breaking in a brand-new reed to sound like an older, more "comfortable" reed can take several days. If your only working reed is suddenly damaged (or if it falls apart!) in a practice or concert, it is a terrible situation. Having three or more trustworthy reeds at any time will help keep this from ever becoming a reality.

Oboe Reeds have a relatively short life, though following our cleaning and care instructions will help you get the most life out of the reed.

When the reed is played out, the tip will become very closed, and the reed will begin to play sharp. The blades of the reed can slip more as well, making the sharpness even worse.

It is very important to have three or more good reeds that are in good shape that can be selected from. Being in the middle of practice, or worse, a concert, and having your only reed collapse is not a position any player wants to be in.

Q&A Continued

Q. What is a good way to learn how to scrape?

A. For **Bassoon reeds**, we recommend 600 grit sandpaper rather than scraping with a knife. Though reed knives are important for making your own reeds, if you are using reeds that someone else has made, the safest way to modify the scrape of the bassoon reed is to use sandpaper. 600 grit is less aggressive, but there are times when 420 could be more effective to do the work necessary, and is more aggressive.

For **Oboe reeds**, we recommend beginning with the ReedGeek tool. It is more difficult to permanently damage the reed with the ReedGeek compared to using a knife. It is safer to have in a band room than a knife.

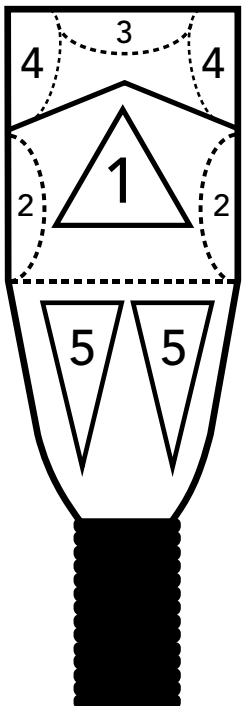
We have videos showing how to scrape, but ultimately you must practice the skill to improve. Practicing on old, dead reeds is recommended to learn how to make the proper motion to remove the amount of cane that you are trying to remove. It is always better to begin taking off a very small amount of cane at a time. Make sure that if you are using a knife, you also use a plaque. Always make sure that the reed is soaked well before you begin scraping.

Troubleshooting Section Next

Double Reed Adjustments

Oboe

These adjustment are meant to help adjust the oboe reed using the Reed Geek tool. The adjustments should be made by scraping upward and only small amounts of cane should be removed at a time.

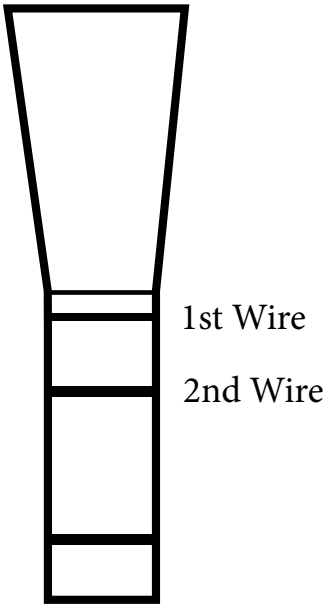


Problem Area	Solution
Zone 1 Heart	• Open Reed • Brighten Sound • Lower Pitch
Zone 2 Rails	• Ease Attach • Lower Pitch • Ease Lower Register Notes
Zone 3 Tip	• Ease Attack • Brighter Sound • Open Reed
Zone 4 Tip Sides	• Ease Attacks • Calm Sound • Smooth Tone • Close Reed • Improve Low Notes
Zone 5 Windows	• Stabilize High Notes • Ease Resistance • Calm Upper Notes • Warm Sound and Add Tone Complexity

Bassoon

These adjustments are made by slightly pressing on the wire with pliers from the side or the top and will can be used to address a number of concerns. Below is a quick chart for adjustments of the 1st and 2nd wires.

Round Wire	Flatten Wire
1st Wire • Open Reed • Darken Sound • Add Resistance • Lower Pitch	1st Wire • Close Reed • Brighten Sound • Ease Resistance • Raise Pitch
2nd Wire • Close Reed • Darken Sound • Add Resistance • Raise Pitch	2nd Wire • Open Reed • Brighten Sound • Ease Resistance • Lower Pitch



Troubleshooting

Q. Why does the first-finger E-natural drop in pitch on my bassoon reed?

A. Nearly every time the first-finger E drops, or seems to sag, it is because the second wire is loose. It may not look loose or even feel loose, but if you place a mandrel in the reed and with your pliers pull on the wire coil, you may find that there exists some slack that can be tightened. Pull the wire coil out 90 degrees from the reed to expose the slack, and then gently twist with your pliers until the coil goes all the way down to the cane. You only want to remove the slack; do not over-tighten the wire on the reed by using a lot of force. Over-tightening can cause the reed to become stuffy, sharp, or break the wire or the reed.

Q. What do I do if my reed is stuffy?

A. For **Bassoon reeds**, check the tip opening to make sure that it is not too open. If it is stuffy and bright, round the second wire and then adjust the first wire to ensure the proper tip opening. If the reed is too dark, flatten the second wire and adjust the first wire to ensure the proper tip opening. Keep in mind that the two wires create opposite effects on the tip opening.

To improve the response of the reed, you can also put a "chisel tip" on the tip of the reed by using 600 grit sandpaper with the reed held at about a 20-degree angle. Lightly press the tip so that it is evenly distributed on a small piece of sandpaper, and gently drag the reed tip backwards two inches down the sandpaper 2-3 times on each side of the reed. This will dramatically improve the response.

For **Oboe reeds**, lightly scrape the middle of the tip and the very tip of the tip across the entire tip. Lightly scrape on the transition from the heart to the tip in the center of the profile (scraped surface). Lightly scrape the top of the spine in the heart. Check the reed after each little adjustment to ensure that you stop scraping at the earliest point so as to not take too much cane off. The tip may need to be clipped at the end of the adjusting to ensure pitch as well as to help with projection.

Troubleshooting

Q. What do I do with a flat reed?

A. For **Bassoon**, first, make sure that the tip opening is the appropriate size, approximately 1.5mm in the center of the tip when soaked properly (60-90 seconds). If it is too open, then use your fingers (or gently with pliers) to squeeze down the reed at the first wire until the tip opening is 1.5 mm wide. If only first-finger E natural is playing flat, the second and possibly the first wires are loose. With the reed soaked, and with a mandrel inserted if you have one, use your pliers to gently tighten the wires. Rounding the second wire by squeezing the sides of the wire can also help bring up the pitch. Once you have rounded this wire, you may need to adjust the first wire to ensure the 1.5mm tip opening.

If the entire range is flat, the tip needs to be cut or trimmed. Trim only about a half of a millimeter at a time, testing pitch between. This helps to ensure that not too much is clipped off, causing the reed to become sharp. When tuning is stable, create a chisel tip once again.

For **Oboe**, first, make sure the tip opening is the appropriate size, if it is too open, soak the reed and then squeeze it down from the bark all the way down the blade (this is most often the quickest fix and most necessary).

Second, clip the tip with a tip cutter or a razor blade with a cutting block (just a hair's width at a time until the reed is up to pitch).

Third, scrape the corners of the tip to improve the re sponse (clipping the tip will expose the thicker part of the corners making the reed a little less responsive if you don't scrape them to thin a little more).

Lastly, if the reed will not come up to pitch, slip the blades of the reed to the right so they overlap a little more, reducing the aperture which will bring up the pitch.

Troubleshooting

Q. What can I do if a wire breaks on my bassoon reed?

A. Remove the entire old wire.

Get a new 21or 22-gauge brass wire (we recommend 21-gauge for better function and durability) approximately 3-1/2 inches in length.

Hold the reed in your hand with your non-dominant hand, and with your thumb, hold the center of the wire on the spot where the wire coil was.

Use your dominant hand to make the right side of the wire go around the reed to the right and to be on top, and the left side of the wire to go around the left side and on the bottom.

Watch the wire as you wrap, to make sure the sides do not accidentally cross each other.

Give the wire ends a single, full twist with your fingers. Then using pliers, grasp the crossed wires at the point where they overlap. Twist the wire counter clockwise (to the right) until the wire is snug.

Use the wire cutter on your pliers to clip off the excess so that the coil remains about a quarter of an inch long. Use pliers to place the coil down so that it is parallel to the reed.

Q. What do I do with a bassoon reed that has a chipped corner?

A chipped corner is not the end of the reed. Without doing anything, the reed will still play, and will most likely play just fine. Many reedmakers actually clip the corners of their bassoon reeds, and it does not negatively affect the overall performance of the reed.

If you desire to balance the reed, you can take a pair of scissors (or a cutting block with a knife, or a reed tip cutter if you have tools) and clip off the corner of both tips at a 45-degree angle to cut away the damage and balance the tip opening. You must be sure not to take off too much, only 2-3mm in from the corner of the tip should be taken off at most. Again, if the reed is playing well enough for you without doing anything, the recommendation would be to leave it be.

Troubleshooting

Q. What can I do if the thread falls off or unravels on my bassoon reed?

A. As the reed is soaked and dried repeatedly, the cane will shrink and the wires will eventually become loose, including the wire under the thread. If the thread is just loose but still on the reed, push it back into its normal place, and coat the entire thread area with clear fingernail polish. Let dry completely. If the thread and wire fall all the way off, replace the wire as shown above, and then coat the tube of the reed from below the second wire all the way to the bottom with fingernail polish to reseal it. Two or three coats will last longer than one. Allow to dry completely between coats.

Q. What can I do if the reed feels resistant or does not articulate well?

A. For **Bassoon**, slow articulation is often a result of too much resistance in the reed, especially near the tip. First, make sure that the tip opening is the correct size. A tip that is open more than 1.5 mm will often cause slower response because of the blades being farther apart (greater resistance). It is also possible that the tip is too heavy or thick. To improve the response of a blunt-ended reed, put a "chisel tip" on the end of the blades by using a small piece of 600 grit sandpaper, holding the reed at about a 20-degree angle. Lightly press the tip so the very edge is evenly distributed on the sandpaper, and gently drag the reed tip backwards two inches down the sandpaper 2-3 times on each side of the reed. This will decrease resistance and improve the response. If the is still slow, flatten both wires slightly, and check the tip opening. This further reduces resistance.

For **Oboe**, resistant reeds are often that way because of the tip opening. If the tip opening is too open, the reed will not want to vibrate easily. Soak the reed and squeeze it down from the bark all the way across the blades of the reed. Next, scraping the corners of the tip will reduce the resistance. Thin out the tip gradually from the blend from the heart to the corner of the tip. If the tip opening adjustment does not correct the resistance, it may be resistant because it is leaking.

Troubleshooting

Q. What can I do with a leaky oboe reed?

A. Determine where the leak is by soaking the reed 30-60 seconds and then dipping the reed up to the thread so it is wet. Plug the bottom of the staple with your finger and blow into the reed. If the bubbles come up through the thread or at the bottom of the cane near the thread, the leak can be fixed. If the leak is up around the heart of the reed, the reed is unrepairable.

To fix a leak around the thread, you can do a few things. If you have beeswax, you can rub it in the thread and then work the wax around the thread with your finger. You can also use a very small piece of plastic wrap or plumber's tape to wrap around the thread and up to the top of the bark just below the bottom of the scrape.

Q. How do I fix a chirpy oboe reed?

A. This typically results from a tip that is too thin or an overly defined heart. Soak the reed and insert the plaque. Look for the thin spot in the tip, and try to blend the rest of the tip with the thinnest spot.

If the heart is too defined (very rigid ledge from heart to tip), then the ledge can be scraped to blend it more. Check the reed for pitch, and clip if it is now flat. If the tip is too thin, then you can scrape to move the top of the heart down, elongating the tip and exposing more of a thicker tip, then clipping the tip to remove the very thin part. After this is completed, it is likely the reed will need clipped even a little more to bring up the pitch.

Troubleshooting

Q. Why doesn't my bassoon reed fit on my bocal very well?

A. The reed end of a bocal can come in many slightly different designs or angles. The soaking and drying of the cane can, over time, cause the cane to lose its round shape. Both of these things can combine to cause your reed to wobble on the end of the bocal, and to possibly leak air at that area. It is good to have a bassoon reed reamer that matches your bocal.

1) Soak the reed properly and check its seal on the bocal by twisting it on at least 180 degrees. If it wobbles or leaks air even when soaked, then gently use your diamond-coated reamer to take a little out of the tube. Do this very sparingly, checking between reams for fit. Once it fits, do not ream any more. Over-reaming can cause the reed to go too far on the bocal and play sharp.

2) If you own a reamer with straight or spiral blades, ream the reed tube when completely dry.

3) If you do not have a reamer, try wrapping a layer of sandpaper around the handle of a small paint brush.

For More Information

Diamond Musical Product, LLC
d/b/a/ Jones Double Reed Products
303 E. Pacific Ave.
Spokane, WA 99202
(509) 747-1224 ext. 2
manager@jonesdoublereed.com