

**No More Squeaks! How To Successfully Diagnose and Treat Issues on the Clarinet**  
**Dr. Lori Baruth**  
**Clarinet Professor at Morehead State University, Yamaha Performing Artist**



**2013 Kentucky Music Educator's Association Conference Presentation**  
**February 7, 2013**

Every instrumental ensemble needs a strong clarinet section. Effective directors know and teach current philosophies on tone production, basic maintenance, when to use which fingerings, appropriate reed information, and what current equipment will allow students to reach his or her potential. When clarinetists in your ensembles squeak less and produce a consistent, good tone, it will help the retention rate of your program, as the students will enjoy their music making more because they sound good. It is important that the student becomes aware of, and thus likes, how he/she sounds when practicing at home or playing in school ensembles.

Remember, it is always better to help create good habits than to wait until a student has figured out something that is a bad habit and then try to undo it. It is important to constantly assess your young players, or any player who is learning a new register of notes on the clarinet, or a new concept. Be on the lookout for issues to nip them in the bud. I believe it to be a disservice to students when they are not examined visually and aurally to how they are progressing as instrumentalists. I find too many students have played for several years before they are told that something fundamental to how they play the clarinet is completely incorrect. Let's help them by being proactive rather than reactive.

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## What are some common causes of “squeaking” on the clarinet?

First, most of the time, it's not really a “squeak.” Rather, it is usually an unintended high partial.

**Be the clarinet doctor:** What is kind of sound do you hear? What do you see when observing the student visually?

**Symptom:** Squeaky, squawky sounds.

**Examination:** To come to a diagnosis, one must look at the student, listen, and determine the cause of the unwanted sound. What causes these ultra high partials to sound rather than the anticipated note printed on the page?

## Possible Diagnoses:

1. **Almost always, the culprit is biting.** In fact, biting is the #1 cause of these unwanted sounds on the clarinet. When one bites, or clamps down on the reed, it tends to cause a very high partial to sound. What causes biting? Poor embouchure.

**Treatment: Review and constantly emphasize good embouchure habits.**

### Embouchure:

- Curl lower lip over teeth (just inside lip line) to create a stable, firm platform with lower lip. This causes chin to flatten downward. Top teeth should touch the top of the mouthpiece. Corners of the mouth are pulled out and up (diagonally).
  - When all three things happen, the muscles have created an airtight seal around the mouthpiece. The mouthpiece is held by pressure from firm corner muscles, there is firm support in the upper lip, and very importantly, the chin should point down (no bunched chins!). Avoid lowering the jaw to pull chin down, though.
- Embouchure should be firm. – No flabbiness in the lips or chin. Avoid saying words like “tight” or “bite” to your students. Say, “firm,” “support,” or “equal pressure.”
- Give the students a straw for practice.

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- One can check a student's embouchure pressure/hold by attempting to lightly wiggle their clarinet back and forth. The instrument should not move very much, nor should it be "clamped."
- Have students use a mirror to visually see what their embouchures look like. Even a small one to put on the stand when first learning is very useful. Encourage playing in front of a mirror when practicing at home.
- Have students put two fingers on their chins and form their embouchure. Have them feel the indentation in their chins. Have this hold these two fingers (helping to "pull" their chins down) and practice blowing air out as they maintain this embouchure position. Next, have them play an open G with their two fingers on their chins to produce a tone with the feeling of the flat chin and firm embouchure muscles.

## 2. Too much or too little mouthpiece in the mouth.

**Treatment:** Students should take about  $\frac{1}{4}$  inch of the mouthpiece into his/her mouth.

- If you hear a big "squawk" or overblown sound, the student likely has too much mouthpiece in her mouth, thus she needs to take in a little less mouthpiece.
- If you hear a tight, pinched sound, as if the air is having a difficult time getting through the instrument, the student likely has too little mouthpiece in her mouth, and thus not enough of the reed is able to vibrate to produce a pleasing tone. The student should take in a bit more mouthpiece to avoid playing out on the beak of the mouthpiece.

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### 3. Student is depressing a throat tone or side key while attempting a note not requiring those keys.

**Treatment:** Review good hand position with the student and remind him/her to be sure to avoid bumping keys when playing certain passages or fingerings. \*This problem often occurs when students are learning to go from throat tone A to long B natural.

- In this situation, have the student practice moving slowly between the two notes that seem to cause him/her to clamp fingers onto the clarinet. It may be helpful to play some call and response or echo games with these notes. Handwriting a few extra exercises incorporating this note pattern would be of tremendous benefit for your clarinet students.
- To ward off this problem before it might occur, when first introducing moving from the throat tones to the clarion register, use the phrase “register change.” Avoid telling students the phrase “over the break.” If we do not tell them that something is challenging, it may not be to them.

### 4. Angle of clarinet is too horizontal.

**Treatment:** The clarinet angle should be approximately 35 degrees, but more vertical – not like an oboe. Blow air against the reed, not down into it.

### 5. Embouchure corner muscles are not firm enough. This squawky sound can also be labeled a “bark-like” sound. This often occurs on long B naturals.

**Treatment:** Review proper embouchure requirements with the student. At times, students can have an embouchure that is kind of firm, but not really firm enough.

- The clarion register (long) B natural is a note that will immediately make it evident that embouchure muscles are just not firm enough.
- An added bonus to correcting this problem is that general tone quality and intonation will improve. ☺

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## 6. A problem on mainly on clarion register G# and/or A.

**Treatment:** This problem is a voicing issue. The student needs to hear the note, rather than just press down a fingering. Have the student sing the note. If they miss the pitch, or are sharp or flat, they are not hearing it properly.

- It is important to emphasize that the higher one plays on the clarinet, not only does the embouchure need to remain the same, but the tongue and throat position need to lift higher as the notes move higher. If one attempts to play higher notes without the proper lifting, or opening of the throat and tongue, the squawky, crackly sound will likely occur.

## 7. A problem on mainly clarion register (long) C#.

**Treatment:** Student needs to press the key quickly and firmly.

- Because the C# requires that one pad close and one open near the bottom of the clarinet, this note tends to be a squawky note on the clarinet, especially when using the left side (chromatic) C# key.
- This issue may also arise if the student's embouchure is not quite firm enough.
- Have the student practice slurring C#-D-C#. Start on C#, then try again starting on D.
- Have the student practice slowly part of the chromatic scale (B-C-C#-D-D#-C#-C-B) and repeat.

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## 8. Inconsistent air stream, either from weak air support or nervousness.

**Treatment:** Review the fact that strong, solid, fast air support is required, not just desired, on the clarinet.

- Various breathing exercises can be useful in this situation. Practice breathing in for 4, out for 4; in for 4 out for 8; in for 2 out for 8; in for 2 out for 10; in for 1, out for 6; in for 1, out for 8; in for 1, out for 10 or 12, etc.
- Tell the students to pretend that there is a pinwheel in the bell of the clarinet, and to blow the air to the bell to spin the pinwheel.
- Often, students blow air only to the mouthpiece, or, just the reed. The clarinet is a resistant instrument, thus one must think of wind power. The clarinet is a woodWIND. The “wind” part of that term is incredibly important.
- I require a Breath Builder ® apparatus for all of my students to help them with feeling what kind of air resistance and power they need to have to produce a good tone on the clarinet. There are many devices like the Breath Builder ®, used in hospitals or science museums to examine lung capacity. If it is possible, this would be a great learning tool for students to practice how to use fast, powerful, deep breaths to create a good tone.
- One may need to also review the concept of “abdominal” breathing, thinking of breathing from where the diaphragm is, opening the front and back of the rib cage to breathe, and to avoid moving shoulders up to inhale. There are many ways to approach and review proper breathing, which we do not have time to go into today, but they are extremely important.
- Have the students feel the air rushing under their fingers when they play the clarinet. Often, focusing on this tactile phenomenon increases awareness of the abstract concept of efficient air usage when playing the clarinet.

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## 9. Squeaking in the altissimo register.

**Treatment:** The cause for this problem is often biting (see #1). However, a pinchy, tight sound that is on the verge of squeaking can be caused by a variety of problems: biting (#1), weak air support (causing biting) (see #s 7 and 1), or improper voicing in the altissimo register. Let's discuss voicing.

- Proper voicing in the altissimo register of the clarinet is a common problem with clarinetists of all ages. It is important to emphasize with students how to approach playing in the altissimo register is not just a continuation of the clarion register. There are different rules for getting the clarinet to cooperate when playing in the altissimo register. As I often tell my students, "Putting down a fingering is not enough."
- Additionally, getting *a sound* is very different from getting a *good sound* when playing up high.
- Many exercises could be beneficial in helping students become proficient in altissimo register playing, but for the purposes of this short meeting, I will list a few basic ideas for students.
- Remember that the higher the notes go, the higher the tongue and soft palate (open throat) position should be.
- Have the student practice singing the correct pitches on an "ee" vowel. Sing an interval to be played in the altissimo register (in whatever register is comfortable for the student) with both pitches on the same "ee" vowel. This will demonstrate how the tongue moves and soft palate is lifted when playing. I have found many similarities in singing and playing in the altissimo register on the clarinet.
- Often, when a student attempts to sing the desired pitch to be played in the altissimo register, they quickly learn if he or she was over or undershooting the pitch. This is excellent for improving intonation in this register as well.
- Embouchure must be maintained for all notes that one plays on the clarinet, including the altissimo register.
- Air support must be strong to allow for altissimo register playing. It is always a good idea to give more air instead of less air—especially when playing up high.
- Assuming that both embouchure and air support are not the culprit in a problem with the altissimo register, improper voicing is likely the cause.

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## 10. The student squawks mainly when articulating.

**Treatment:** Review correct articulation technique with the student.

- First, emphasize that the air stream and the tongue are two separate entities. They should not do the same thing. The air stream should be a constant flow of fast, focused air. The tongue is like a surfer, riding the wave (airstream).
- “Tip of the tongue to the tip of the reed.”
- Use “too” or “tee” to help students keep air moving forward and tongue from sinking low as in “tah.”
- Embouchure should remain the same from slurring to tonguing. It is a constant.
- The tongue should lightly touch the reed to delineate the start of a new note.
- Harsh, or heavy tonguing could certainly cause a squawk when articulating.
- Watch out (especially early) that students are not huffing or closing their throats to “articulate.” You’ll be able to hear and see this very bad habit.
- Review regular articulation versus staccato articulation.
- Stopped articulation may often be necessary for certain tempi, so a review of the above articulation concepts is helpful as one also discusses “tut,” where the tongue starts and stops the note touching the reed. Backpressure is necessary, but embouchure and air support should remain the same as in slurred playing. Again, one could elaborate for many pages here, but I will save that for another clinic.

## 11. Reed is dry, chipped, or warped.

**Treatment:** Verify that the student’s reed is not chipped, dried out, or extremely old (brown).

- It is imperative that the student’s equipment is in good working order. The “set up” consists of the reed, mouthpiece, and ligature. Reeds must not be too old, soft, warped, or broken in any way. Mouthpieces with chips are deadly. They, too, need to be replaced.



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- Let's talk equipment:
  - Suggested Mouthpieces
    - Beginners: Premiere by Hite (\$20), Pyne Polycrystal (\$55)
    - Intermediate: Vandoren 5RVLyre (\$86), or Vandoren B45 or B46 (\$86) (these two are resistant, but teach how to really blow lots of air)
    - Advanced Players (college and professional): Rico Reserve (\$98.50), Vandoren M30 or M15 (\$86), Vandoren Masters mouthpieces (CL4 or CL5) (\$126), or many other hand-faced options: Pyne-Clarion, Richard Hawkins, Lomax (all of these are around \$300 and up).
  - Suggested Ligatures
    - Bonade (\$15–18) regular or inverted are fine
    - Luyben (\$11.99) and comes in many fun (school) colors! Students love this aspect, and the darkening tone quality is helpful for many players. Find them at [www.luybenmusic.com](http://www.luybenmusic.com).
    - Advanced students: Vandoren Optimum (\$69.99!) or Vandoren M|O: \$50 (Silver-plated) or \$80 (Gold-plated). Black and pewter are also available, but I did not like sound as well when I tried them.
  - Suggested Reeds
    - Beginners: Mitchell Lurie (made by Rico) or Vandoren Traditional (blue box).
    - Intermediate/Advanced: Vandoren V12 (silver box), 56 Rue Lepic (black box), or Traditional (blue box). Both the V12 and Rue Lepic come in a 3.5, 3.5+, or 4.0 strength that will be helpful for most all advancing students. New in the past few years: Rico Reserve Classic – Fantastic reeds – comparable to V12, for advanced students. Much more responsive (thus less expensive per reed) than most any other Vandoren reed type or strength. 4 or 4+ for advanced students. Perhaps 3.5 or 4 for high school students.
    - Others are available to experiment with, but not necessary (Gonzalez, Rico Grand Concert Select, Rico Reserve, Glotin, etc.)

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- 12. There is water in a tone hole causing unwanted squeak when trying to play a note using that key.**

**Treatment:** Swab the clarinet out and use tissue paper to get the water out of the tone hole. If in a pinch, one can open the key and blow the water out of the tone hole with a short, fast burst of air.

- 13. Is it the machine or the operator? It is possible that there is some mechanical issue with pads not sealing on the clarinet, but most times in young players, the cause of the squeaking or squawking is the player.**

**Treatment:** If all of the above problems and solutions have been addressed, one may be allowed to think that a mechanical problem is the culprit of a problem, in which case, one should seek the assistance of a reputable instrument repairperson who specializes in clarinet repair.

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## Items that you, the director, must emphasize:

- I. Good Tone Quality
  - A. Decent Equipment—at a minimum
  - B. Excellent Embouchure
  - C. Fast, Spinning Air Required
  - D. CORRECT Articulation Technique
  
- II. Diligent Practice
  - A. Recommend/Require a Practice Journal
  - B. Quality material to practice and learn
  - C. Insist on Scale and Arpeggio Knowledge
  - D. Encourage Involvement in KMEA Solo and Ensemble Contests
  - E. Private Lessons, Private Lessons, Private Lessons
  
- III. Good Examples/Modeling
  - A. You ☺
  - B. Play Recordings for your students
  - C. Private Lesson Instructors
  - D. Guest Clinicians/Groups
  - E. Their peers

## Recommended Method and Etude Books:

1. Rubank Series (Elementary, Intermediate, Advanced)
2. Breeze Easy (Books 1 and 2)
3. Selected Duets by Rubank (Easy/Medium and Advanced) – Rubank
4. Selected Studies by Rubank (Advanced Etudes, often used for All-State auditions, etc.)
5. Klosé Celebrated Method (big orange book) – great Intermediate and Advanced technical studies, with duets, etc.
6. Rose Book of 32 Etudes (Advanced students – good for college auditions, etc.)

## Recommended Solos:

1. *Concert and Contest Collection* (Rubank) – great for intermediate students
2. von Weber, Carl Maria. *Fantasia and Rondo*
3. von Weber, Carl Maria. *Concertino*

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4. von Weber, Carl Maria. *Concerto No. 1* or *No. 2* (mvts. 1 or 3)
5. Mozart, W. A. *Concerto* (be sure you have a version of the piano accompaniment for Bb clarinet!). Intermediate – mvt. 2, Advanced - mvts. 1 or 3
6. Böhner, Johann. *Fantasie für Klarinette und Klavier*
7. Berr, *Fantasia*
8. Cavallini, *Adagio and Tarentella*
9. Wanhal, *Sonata in Bb Major*
10. Stamitz, *Concerto No. 3*
11. Brahms *Sonata No. 1*, mvt. 3
12. Brahms *Sonata No. 2*, mvt. 1
13. Many others: I'd be happy to assist on a case-by-case basis if you find need.

**Selected Recommended Artists for Listening Purposes (tone quality, musical interpretation, clarity)**

1. Robert Marcellus
2. Ricardo Morales
3. Sabine Meyer
4. Anthony McGill
5. Harold Wright
6. Alessandro Carbonere
7. Paul Meyer
8. David Shifrin
9. Stanley Drucker
10. Charles Neidich
11. Elsa Verdehr (Verdehr Trio)
12. Eli Eban
13. Robert Spring
14. Martin Fröst
15. Charles West
16. Caroline Hartig
17. Janet Hilton
18. Many more – just ask! ☺ Also check: [www.weinermusic.com](http://www.weinermusic.com) for many great cds for sale (listed by artist)