ESSENTIAL CONCEPTS IN ADJUSTING Bb CLARINET REEDS

by Tom Ridenour

Reeds need not be a frustration to the clarinetist, nor is reed adjustment as complicated as some of the many articles written on the subject may indicate. There are two aspects to the reed which are critical; resistance and response.

Basic Reed Resistance

Let's consider the matter of resistance first, since it is most basic and most simple.

The first step to successful reed adjustment is relatively simple: find which brand and strength of reeds produces the greatest number of reeds which combine with your mouthpiece to produce a comfortable blowing resistance. It might be best to choose a strength which tends to be a little hard, since the reed balancing process unavoidably reduces the reed's overall resistance.

Once the player finds the brand and strength of reeds which yield the most comfortable blowing resistance he needs to consider the response of each individual reed.

Reeds respond poorly and unpredictably because they are poorly balanced. Balancing the reed is, in reality, nothing more than correcting the response of the reed. Response itself needs to be considered from two aspects or facets.

But before we consider them, what they are, how to evaluate them and how to achieve any needed correction, let's first back-track briefly and say a few things we need to know about mouthpiece facings.

You will notice that the facing of the mouthpiece has two side rails and a tip opening. Both rails must have identical resistance curves, and the most open part of the mouthpiece should be the very center of the tip. We call such mouthpieces symmetrically faced mouthpieces. A symmetrically faced mouthpiece simplifies reed adjustment tremendously.

Having said that let us now discuss the second factor in reed adjustment, that of response.

Reed Response

Efficiency in any aspect of the clarinetist's equipment means simply that it enables the player to play low, high, loud and soft with a minimum of embouchure/air pressure exchange. Stated another way,
efficiency means the player can play the full dynamic and pitch range of the instrument with minimal adjustment in embouchure and air.

The reed is no exception to this rule, and in balancing the response of the reed we are balancing the response to be efficient, secure and predictable in both dynamics and pitch range (loud and soft, low and high).

Balancing the Reed

You will notice the mouthpiece not only has two side rails, but the reed also has two corners at its' tip.
A reed is well balanced when:

1. each ear vibrating on its' respective rail produces identical resistance, response, tone color and "ring" or resonance decay.

2. responds equally well in all three registers without need to change embouchure and air pressure.

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When a reed will do these things and has a basic comfortable blowing resistance we say the reed is well balanced.

How do we get the reed to respond in this way?

The Dynamic and Pitch Response Tests

In order to get the reed to respond this way, we must first have objective, failsafe tests to find out how it plays as it is. Analogously we might say these tests are diagnostic and tell us how the reed is "sick".

There are two of these tests:

1. The dynamic response test

2. The pitch range response test.

It takes not a little practice to learn how to do them well, and the better you do them the easier it is to know what is needed to correctly adjust the reed.

Here are how they are performed.

The Dynamic Response Test

Many players will recognize this as a variation on the side to side test. It is similar, but much more refined, and much more effective in discovering where the faults in side to side balance of the reed lie.
The test is performed as follows:

1. Rotate the reed to one side of your lower lip about 45 degrees, so that one corner of the reed is damped and cannot vibrate while leaving the other corner or "ear" of the reed free to vibrate.

2. On an open "G", blow a burst of air into the clarinet as if you were playing a sFz>P. Feel how quickly and easily the reed responds, listen to the tone color, and feel and listen to how the ear or corner "rings" as you taper the air for the sforzando. The whole resonance decay should be no more than three or four seconds. The player's discipline is not to maintain the sound at all costs, but simply to evenly taper the air and let the reed respond as it will. In short, the object of the test is to see how
well the reed works, not how well you work.

3. Next, reverse the reed rotation, play the burst of air and see how the other ear responds to the air.
You have now performed the dynamic response test, that is, you have seen how each ear of the reed responds and "rings" throughout the full dynamic range from the loudest to the softest whisper.

Evaluating the Dynamic Response Test

Once you have performed the test on both ears or corners, next compare each ear's resistance, response, tone color and resonance decay in your memory. Were they the same is every respect? Or was one more responsive than the other? Did one ring better and longer than the other ear?

If they were not the same, the more resistanct ear or corner of the reed which did not ring and decay as well as the other needs to be adjusted until it is the same. Thin the reed on the hard or resistant corner, replace the reed on the

mouthpiece, and retest.

Repeat this process until the ears have identical responses, tone colors, and resonance decays.

Now you are ready to perform the second test.

The Pitch Range Response Test

Play low "C". Open the register key and slur to a "G". Pick up the first finger of the left hand and depress the low "Ab" key and slur to "E" above the staff, then lift the low "Ab" key as you open the low "F#" key (left hand pinky "F#" lever) and slur to high "A".

Evaluating the Pitch Range Response Test

Does every tone in each register immediately respond in a similar fashion and with the same tone color while you keep your embouchure and air pressure the same? Or do the higher tones exhibit a sluggish response or "narrowed" tone color unless you make a noticeable change in air and/or embouchure pressure?

If there are problems with tone color or response in the higher tones this indicates the reed is unbalanced near the very tip of the reed.

Check the way the very tip flexes at each corner of the reed to see if they are the same. Re-perform the dynamic response test on a more detailed and subtle level to see if you can't detect the imbalance you may have discovered in the flex and Pitch Response Test.

Once you are sure of your information, thin the unresponsive tip area and re-perform both tests. Repeat this procedure until the reed plays correctly.

If you have performed your job of testing, evaluating and finishing well you will now have a reed that works. That is, you will have:

1. A reed with a comfortable basic blowing resistance.

2. A reed which plays and responds well on all pitches and at all dynamic levels.

What clarinetist could ask for more?

Of course, there are many subtleties and detail which have been omitted in this little monograph. But the information above should give the clarinetist the general concepts and goals with which he may securely develop his reed testing and adjusting skills.

Remember, perfect practice makes perfect.

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