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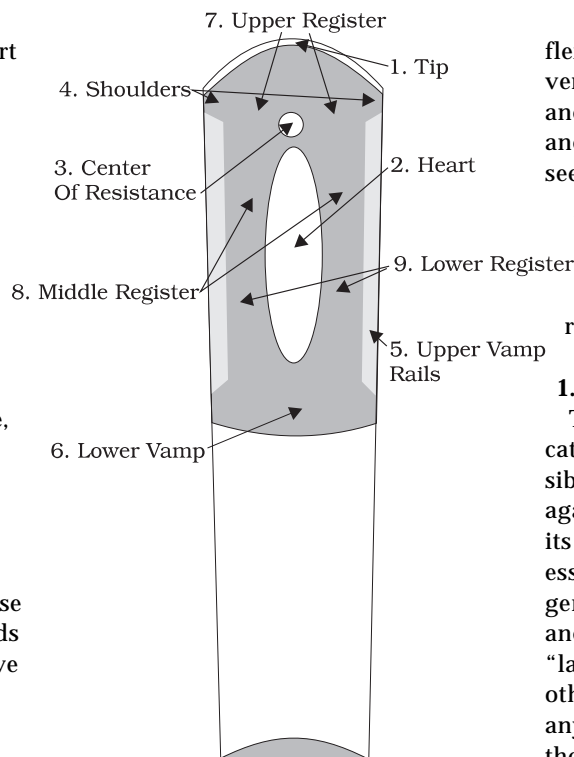
## Basic Saxophone Skills

### Reeds, Part II

In my previous column (Reeds, Part I) I discussed the preliminary procedures in preparing reeds for general use. Remember that these techniques are quite helpful because they extend the life of the reed, as well as making the reed more useful for your individual concept of sound and playing. I hope also, in the time that has passed between the last article and this one, that you have procured the necessary equipment to prepare, adjust, and store your reeds:

1. Some sort of reed storage case, preferably one in which the reeds remain flat and dry
2. A plate of glass or Plexiglas, to use as a surface for working on the reeds (and make sure the sharp edges have been smoothed).
3. Some sandpaper, 400 to 600 grit.
4. A reed knife, which can be purchased from most instrument shops.

Let's assume you have four reeds that you have started to prepare. You've taken them through the first and second phases of conditioning, which simply involve soaking the reeds and testing them for their individual strengths and weaknesses. Remember that you should not be using these reeds for general practicing and playing use yet! They are not ready for the amount of exposure to moisture and vibration we will put them through. These reeds are now in the testing and adjusting stages, which will fine-tune them to become the kind of reeds that you would love to have straight out of the box: not too hard, not too soft, and a consistently good



and uniform sound throughout all registers and dynamic levels of your saxophone.

Before we start to adjust our reeds, it's good to know the actual physical makeup of a reed and why it works. That way if there is a problem with a particular reed, we know exactly where to go to fix it. Please refer to the diagram of a reed I have provided in this article (FIGURE 1).

The main function of the reed is to act as an air valve which opens and closes the mouthpiece. The rate of vibration or frequency of the reed determines the pitch of the tone produced by the instrument. The reed changes frequency with every new pitch, thus, the reed must be very

flexible in order to alter its frequency very quickly and efficiently, and start and stop its vibration with the attack and release of each tone. Now you can see why it is so important to adjust your reeds so they will be ready for all this work!

Now, let's review the important parts of the reed. Again, please refer to the diagram included.

#### 1. THE TIP

This is the thinnest and most delicate region of the reed. It is responsible for the airtight seal created against the tip of the mouthpiece, thus its uniformity of size and thickness is essential for good reed performance, general response of the instrument, and tone quality. This area should be a "last resort." Make all adjustments to other parts of the reed before making any adjustments to the tip. And even then, those adjustments should be minimal. Try to leave a little extra cane in this area whenever possible, for if the tip becomes too thin, the reed will be rendered useless.

#### 2. THE HEART

This area in the center of the reed is responsible for the volume, projection, and tone quality of the reed. Adjustments, like the tip, are almost never made to the heart area. If necessary, tiny adjustments can be made, but only for a general effect.

#### 3. THE CENTER OF RESISTANCE

This small area is responsible for the uniform transmission of vibrations from the thinner parts of the reed to the heart. Adjustments made in this area and around the heart region affect

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the tone and response of the reed in the upper register. Be careful, however, because even the smallest of adjustments made in this region can cause major differences in the reed's performance and quality.

#### **4. THE SHOULDERS**

If a reed is thicker or thinner on one side than on the other, this is the region to adjust. The uniform thickness of this area is essential to quality reed performance and response. Also, if you want to be really scientific, the thickness of this area relative to other areas will determine the reed's response in specific registers and at specific dynamic levels.

#### **5. THE UPPER VAMP**

The upper vamp rails. The entire section of the reed we are using to make adjustments on is generally known as the vamp. It is divided into two sections, upper and lower, determined by the placement and size of the heart region. The smooth area (without the grain) which we do not adjust is called the stock.

Removal of cane from one side or the other of this area will affect the reed's balance, response, and resonance. Be careful to make your adjustments to this area gradual and balanced. If you remove a certain amount of cane from one side, do the same to the other side.

#### **6. THE LOWER VAMP**

Some reeds have some extra wood in this region. Removing this excess cane can help to make hard reeds a little more soft and flexible and usually improves response in the lower register. Also, a general sanding of the entire lower vamp region (the area from the bottom of the heart to the stock) will improve response in the lower register.

#### **7, 8, 9. UPPER, MIDDLE, AND LOWER REGISTER ADJUSTMENT AREAS**

Adjustments made to these specific regions of the reed, made after general conditioning and balancing of the reed, and made in conjunction with the other regions of the reed, will help with response and tone quality in specific registers. The specific relation-

ships are: Area 7 with areas 4 and 1; area 8 with areas 4 and 5; area 9 with areas 4 and 6.

So, after all of that, we are ready to begin the third and fourth sessions of our reed conditioning process. We begin each session with a general soaking for about ten minutes in the glass of water as was described in the previous column. After soaking, play each reed for a few minutes to bring it into what I call "performance readiness," in preparation for the next step. In the third session we want to polish each reed. Polishing is used to assess and correct any kind of warpage in the reed, and also to compress and smooth the reed fibers so that the reed will not warp in future uses due to rapid moisture exposure. Take a piece of your sandpaper and place it, abrasive side down, on your piece of glass. Take the reed and place it flat side down on the back of the sandpaper. While holding the sandpaper with one hand, place your index finger on the vamp, your thumb on the stock, and gently move the reed in a back-and-forth motion across the back of the sandpaper. Make sure you exert an equal amount of pressure on each side of the reed, and make sure you do not touch the tip of the reed with your fingers, as you are liable to break or warp it. You know the reed is polished by rubbing the back of the reed and having it be completely smooth. After this, use the same procedure for the vamp and side rails of the reed. Always make sure you are stroking in the direction of the grain and not against it. After the polishing procedure is finished, let each reed dry and return it to storage.

Begin the fourth session with a general soaking, and then play each reed for a few minutes longer than in the third session. After each reed is played, check the reed for uniform gloss, making sure there is no warping from the polishing of the previous session. Check the back side of the reed for flatness. If the back seems at all warped, uneven, or dull, you will have to sand the reed in the following manner: Put the sandpaper on your glass plate, abrasive side up. Hold the sandpaper in place with one hand, and stroke the reed in a similar fashion to that of polishing the reed. Stroke the

reed about ten times, then wipe away the sanding residue, turn the sandpaper over, and polish the reed again. Finally, coat the reed with saliva, place on the mouthpiece, and test it. Repeat this action, as necessary, for each reed. After all the reeds have been properly sanded to your liking, let them dry and return them to storage.

After all of these sessions, increase the amount of playing time for each reed at every session, polishing and sanding as necessary. Remember to rotate the reeds on a regular basis so that one reed does not become over-used too quickly. These reeds, now that they have gone through all the general sessions, are ready for general use and may be evaluated for other future adjustments, if necessary. §