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<th>Challenge</th>
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<td>Playing position and posture.</td>
<td>1) Bring the horn to you.</td>
<td>1) 3/4 size horns--various manufacturers including Holton and Ricco Kuehn</td>
<td>General Horn Information</td>
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<td></td>
<td>2) Sit at least a few inches away from the back of the chair.</td>
<td>2) Horn support to allow &quot;off the leg&quot; playing.</td>
<td>Farkas, Philip. <em>The Art of French Horn Playing.</em> Evanston, IL: Summy-</td>
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<td></td>
<td>3) Keep feet flat on the ground.</td>
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<td>Birchard, 1956.</td>
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<td></td>
<td>4) Let the angle of the leadpipe match as closely as possible the structure</td>
<td></td>
<td>Hill, Douglas. *Collected Thoughts on Teaching and Learning, Creativity</td>
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<td></td>
<td>of your jaw and teeth. Since many horn players have at least a slight</td>
<td></td>
<td>and Horn Performance.* Miami: Warner Bros. 2001.</td>
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<td></td>
<td>overbite, a proper playing position usually results in a descending leadpipe</td>
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<tr>
<td></td>
<td>angle.</td>
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<td></td>
<td>5) Make sure the bell of the instrument is not facing directly into your</td>
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<td>body, as this will result in an overly muffled sound.</td>
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<td>6) If your playing position looks or feels uncomfortable and awkward, then</td>
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<td>chances are it is not the most efficient one for you.</td>
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<td></td>
<td>7) Feel the “sits bones” as you find a balanced and relaxed sitting</td>
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<td></td>
<td>position.</td>
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<td></td>
<td>3) Horn holding strap or left hand support.</td>
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<td></td>
<td></td>
<td>4) Adjust valve levers to fit size of hand.</td>
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<td></td>
<td></td>
<td>5) Use clarinet thumb rests to extend valve levers.</td>
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2 Ibid.
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| Breathing | 1) At the beginner and intermediate level, focus on a sensation and a few useful images rather than on detailed physiological explanations.  
2) Balloon imagery (ala Arnold Jacobs) As a balloon fills with air, it naturally expands without needing to be forced out, and as it expels air it naturally contracts. Another helpful image is a bellows.  
3) Feel the sensation of air rushing across the bottom of the mouth, like a reverse waterfall.  
4) Thinking round syllables on the inhale such as "how," "hoh," or "hah" help to keep the throat and oral cavity open. (As opposed to syllables such as "hee")  
5) The sensation of a relaxed, full breath is similar in many ways to an open mouthed yawn.  
6) Remember that the diaphragm is an involuntary muscle.  
7) Remember that playing with good "air support" does not require a tight or tensed stomach and abdomen.                                                                 | There are numerous types of breathing exercises, including those developed by Arnold Jacobs, Douglas Hill, Verne Reynolds, and Sam Pilafian.  
If practiced regularly, breathing exercises can help increase efficiency in playing and help develop tone, range, and endurance. Breathing exercises ought to be practiced as a precursor to warming up on the instrument, or as a relaxation exercise.  
Numerous possibilities exist for incorporating breathing exercises into an ensemble format, both as a warm-up routine and as a relaxation technique prior to performances.  
Feel free to create your own variations on well known breathing regimens, as well as to create wholly original exercises.                                                                 | The following texts contain excellent information on breathing as well as detailed breathing exercises.  
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| Embouchure | 1) One of the main purposes of the embouchure is to allow for the formation of an aperture. The function of the aperture is to vibrate, in much the same way that the double reed on an oboe or bassoon does.  
2) Philip Farkas describes a properly formed horn embouchure as a “puckered” smile—with neither too much lip in the mouthpiece (pucker) or too little (smile).  
3) Firm (but not flexed) corners and a flat chin are both key physical features of a well formed embouchure.  
4) Especially at the beginner level, work to identify and eliminate any air pockets that may form behind the upper or lower lip or in the cheek area. The flesh of both the upper and lower lip should rest against the upper and lower teeth respectively, with no air behind. | 1) Saying the words “emm” while pointing the chin towards the ground can be effective in forming a working embouchure.  
2) Feel the lower teeth firmly behind the lower lip—avoid letting the flesh just below the lower lip bunch up.  
3) Practice “free buzzing” as an aid to embouchure formation—if you can produce a decent free buzz, then you are forming a basically correct embouchure.  
4) A common problem that becomes apparent when young students attempt to “free buzz” is a lack of lower chin control—the chin and lower lip have a tendency to bunch and creep up. One way to assist in producing a free buzz is to place the index finger directly on the lower lip and chin, holding it in position. Muscular development and control will gradually replace the need for the index finger.  
5) To initiate a free buzz, imagine spitting a hair off the end of your tongue, or spitting out a seed. | Clevenger, Dale. “Basics for Beginning Horn Students.” *The Instrumentalist* 51, no. 8 (March 1997): 34, 36, 38, 40, 42.  
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| Mouthpiece Placement | 1) The age old prescription of 2/3 upper lip and 1/3 lower lip really does work, although jaw and lip structure do play a very significant role in the specific placement for an individual player.  
2) For players with thin to medium lips, lining up the bottom of the mouthpiece with the lower outside edge of the bottom lip can help in finding a correct embouchure placement.  
3) For players with thick or full lips, the bottom of the mouthpiece may not need to rest on the outside edge of the lower lip, but somewhere above it.  
4) It is important that the angle of the mouthpiece follow the natural contour of the player’s face. Since most people have at least a slight overbite, this results in a descending angle. Players with even bites or under bites will have straight to slightly ascending mouthpiece angles.  
5) Moist lips are important in finding a comfortable and workable mouthpiece position. Moistening the lips allows the mouthpiece to settle into the “sweet spot,” as well as keeping the embouchure from “sticking” during lip slurs or wide leaps.  
6) Many young players end up with too little top lip in the mouthpiece, making it difficult to produce higher pitches or a characteristic tone on the instrument. | 1) To find the proper proportion of upper to lower lip, first lightly moisten the lips and form the embouchure described in the previous discussion. Allow the mound of flesh on the upper lip to rest just inside the mouthpiece rim.  
2) Think of the lower lip as an anchor point for the mouthpiece, while the upper lip acts as a “hook” for the upper 2/3 or so of the mouthpiece.  
3) Consistent practice with a mirror on the stand is very important for beginners, until the embouchure muscles become accustomed to a regular mouthpiece position.  
4) A good test of mouthpiece placement is being able to produce a fairly loud, “buzzy” buzz. A buzzy buzz on the mouthpiece is one produced by lots of air, and one in which the buzz sounds free and open, rather than tight and constricted. | Ericson, John. “Embouchure 101” and “Embouchure 201,” *Horn Articles Online.* [http://www.public.asu.edu/~jqerics/Kopprasch_zone.htm].  
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| Right Hand Position      | 1) Along with embouchure formation, mouthpiece placement, and breath control, right hand position is important in producing a characteristic sound on the horn. An improper position can affect tone quality, articulation, and intonation.  
  2) Many younger horn players play with their hand too far into the bell, or with an overly covered hand position.  
  3) Ideally, the right hand should be considered an extension of the instrument, allowing for flexibility in tone quality and intonation.  
  4) Hand positions vary among professionals, but some general characteristics of good right hand position are:  
    a) fingers bent at the knuckle and fairly straight from the knuckle to the tips of the fingers  
    b) thumb close against the side or top of the index finger, with no spaces between  
    c) no spaces between fingers  
    d) palm of hand slightly cupped, as if swimming the freestyle or holding shampoo | 1) Allow the right hand to conform to the shape and size of the bell—this will result in a slightly rounded shape when the back of the hand is pressed against the far right side of the bell.  
  2) Line up the knuckle of your thumb with the bell brace, and then insert the right hand until the thumb touches the upper part of the bell and the bottom edge of the hand makes contact with the bell.  
  3) Avoid the temptation to curl the fingers inside the bell or to splay them out.  
  4) Keeping the right elbow well away from the side of your body helps maintain an open hand position that will not muffle or otherwise obstruct the sound. | Farkas, Philip. *The Art of French Horn Playing*. Evanston, IL: SummyiBirchard, 1956.  
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| Producing a characteristic tone quality | Assuming that a player is breathing properly and has a well formed embouchure, an individually correct mouthpiece placement, and a proper right hand position, a characteristic tone quality involves:  
1) A full, ringing sound that projects more than just a few feet.  
2) An ease and openness in the sound—most easily demonstrated in the middle register and at a comfortable dynamic level.  
3) A distinct “core” to the sound, without air or “crackling” around the edges.  
4) Although concepts of “bright” and “dark” are largely subjective, a characteristic horn sound is in general not brittle or piercing, nor is it diffuse and unfocused.  
5) Most of these issues can be addressed by reexamining embouchure formation, mouthpiece placement, breath control, and right hand position. | 1) Providing beginners with examples of characteristic horn sounds is very important, and much easier today with the availability of solo and orchestral recordings in Mp3 format.  
2) Imagine blowing the air through every bend and coil in the horn, all the way into your right hand.  
3) Try to make the entire room vibrate, no matter what size it is. (Make the room as well as the horn your instrument.)  
4) Feel the vibration of your sound in your nasal cavity, as if you were humming.  
5) Imagine your sound as a continuous stream of liquid flowing out of your bell and to a listener’s ear. | Numerous solo recordings available on amazon.com, ITunes, etc.  
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| Braces (possible complications include playing discomfort, loss of range and endurance, lack of dynamic contrast, unfocused sound, frustration and discouragement, etc.) | 1) THESE EFFECTS ARE NOT PERMANENT! 2) Work slowly but consistently, remaining focused on producing a characteristic sound in the middle range. 3) Avoid excessive mouthpiece pressure as an aid to producing higher pitches. 4) Work towards a relaxed and open aperture in the middle register, as a precursor to high range development. 5) In the middle and upper registers, allow more mouthpiece pressure on the bottom lip, while relaxing pressure on the top lip to allow it freedom to vibrate. 6) Think of the bottom lip as an anchor. | 1) Brace guards to relieve discomfort--AVOID WAX--it will get blown into the horn. 2) Use a mouthpiece with a wide, flat rim to more evenly distribute pressure and allow greater playing comfort. 3) Practice middle register long tones at a comfortable dynamic range. 4) Practice slow, slurred scales in the middle register. 5) Incorporate mouthpiece buzzing into daily practice. | Brace Guards  
http://www.dentakit.com/brgulippr.html  
Mouthpieces  
http://www.hornmouthpiece.com/  
Articles and Advice  

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4 Comparison of normal mouthpiece rim (right) with Neill Sanders rim (left) Image obtained from Thomas Greer, *Moosewood Hornists' Requisites*, <http://www.hornmouthpiece.com/>.