



*Horn: Playing, Teaching
and Manufacturing*

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Sponsor: Patterson Horns

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Texas Bandmaster's Association

“How to Get Your Horn Section from a Clamfest to the Concert Hall”

How can students learn to blow through 20+ feet of tubing, in very high relative partials with relatively little resistance compared to other cylindrical brass instruments?

The key to good and accurate, well focused Horn playing is correct breathing and blowing of the instrument. The following items are essential to getting the most out of good Horn production from the player.

1. **Breathing**: Being able to breathe in a way that allows relaxed air intake, attack and focus and control while putting the air through the Horn is critical. After much experimentation and practice, the best way is to breath low by pushing the lower abdominal area out against the belt area (“Santa Claus breathing”) while relaxing the shoulders and throat area to quickly and easily take in a maximum amount of air. Recent research has shown that this is the breathing system used by top notch bike riders from the Tour de France, etc., in that it helps them take in the largest amount of air in the most relaxed and focused way in the shortest time span.
2. **Attack**: Many students have been greatly helped by “powering up” their attacks to allow the air column to immediately reach a focal point significantly down the tubing of the Horn. This focal point can only be reached if the attack is possessing the system of “shooting the air” down the leadpipe to the point. Telling the student s that they are “spitting watermelon seeds across the room” starts the concept. In rare cases, they may need to back off slightly after getting the concept. The ideal syllable for attacking most of the time in most registers is “**tu**.” For extreme higher notes, “**tee**” works well for the small high speed extreme upper register air column, while for lower notes “**taa**” works the best to allow a large opening for the low register air column.
3. **Blowing**: Blowing into the Horn to a focal point deep in the tubing throughout an entire passage from beginning to end is key. A great way to frame this for students is to have them play Kopprasch Exercise #1 and #2 for Book 1 without any space between notes and feeling as if their air is “blowing a long tone” throughout each phrase, with a slight feeling of actually making a small crescendo, with no deletion of sound after the attack and no decay at the end of the notes. This is actually challenging but very helpful in obtaining the correct “breath / blow” connection of production.

4. **Support:** The best way to support while blowing through a phrase is to allow the lower abdominal area to come inward and finally up under the lungs which helps “lift” the air column up and through the Horn.
5. **Embouchure:** A relaxed embouchure is helpful in allowing the lip vibration to center and maximize. The bottom lip should feel “tucked in” against the bottom teeth while the top lip should be allowed to relax and vibrate freely. Some teachers have referred to this as the bottom lip being the “holder” and the top lip being the “vibrator.” The corners of the lip should hold and not stretch out during breathing. The breathing system should be opening the embouchure vertically to take in air and not horizontally. This allows the embouchure to reset more easily and accurately to the setting for the next attack. If the lips are allowed to vibrate freely, even while playing loud, and the air is used to produce the power, the tone is much clearer, better supported, more accurate, better in tune with a clearer pitch “center,” and more powerful overall.
6. **Loud and Soft Playing:** The best way to **play loud** is to relax and let the air power into the Horn. The deeper defined focal point allows the player to blow through the phrase instead of blowing vertically through each note. Playing horizontally adds much more accuracy and musicality to the playing from trying to envision “one note at a time.” **Playing soft** requires a unique thought with this production style. Keep the focal point in the same place, deeper in the Horn, without letting it come back towards the player / mouthpiece while playing soft. Get softer by keeping the air moving steadily to the focal point, but allowing the opening of the embouchure to relax inside of the mouthpiece rim without clamping on the air column. Both of these production styles allow much better pitch and focus while playing at dynamic extremes.
7. **High and Low Playing:** Good upper register playing requires good and defined air flow while relaxing as much as possible. Keeping the deeper focal point or even making it slightly deeper in the Horn allows the air flow to center higher notes. On attacks, using the aforementioned “tu, tee, and taa” syllables for regular, high and low attacks allows the air flow to work well with the relatively relaxed, efficient embouchure settings in those registers.
8. **Pitch:** Pitch improves dramatically with this production approach to playing. Blowing deeper into the Horn centers the notes much better and makes the tone clearer, purer and better defined. At that point, setting slides helps to finalize the pitch issues. Air is the most important item for pitch control while right hand adjustments should be used for “fine tuning” the production system.

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Horns and equipment issues

In order to get the most out of your horn section, it is essential to start with good quality, well maintained instruments. This will allow your students to get the most out of their efforts.

1. Instruments: Horns should be well built, sturdy, well braced and have smooth operating valves and slides. The most common problem is loose, noisy valves. Valve work is difficult and time consuming and therefore is costly. Avoid this by buying better quality instruments.
2. Playability: It is essential that your horns have an even scale, i.e. play in tune, with no “bad” notes or registers. It is recommended that a teacher or pro player tune the horns. A properly tuned horn will be more even. The note relationships will be more predictable resulting in fewer missed notes.
3. Maintenance: In order for instruments to play their best they must be maintained properly. A yearly cleaning is recommended. This should include replacing the strings, and replacing the rubber bumpers as necessary for valve alignment and when they get too hard. Valve bearings should also be checked for endplay or side play and corrected. Failure to do this will accelerate valve wear and leakage and will cause valve noise.
4. Water: Water (spit) must be removed often. Excess water can cause missed notes. Water keys can help but remember to oil them. Removing water from a French horn can take longer than other brass instruments. Try to allow enough time for this process.
5. Brass vs. Nickel Silver: There is no absolute best material for horns. Brass has the best sound in the softer dynamics, gets a little bit brassy at forte and does not get overly brassy in fortissimo. Nickel silver is less colorful in the piano and mezzo piano dynamics and has a full, rich forte and can get quite brassy when played fortissimo. These are the TRENDS for the two metals but there are also other influencing factors. The player has some control over the color of his sound and can change the amount of brassiness to fit the style of the music. Horns, which have smaller bell throats, will tend to get brassy as lower dynamics.

There is a slight preference for large bell nickel silver horns which have a natural big, full forte with little brassiness and can project well at fortissimo with the help of a bit of brassiness.

6. Mouthpiece/Rim: The mouthpiece shank should not be bent in such a way that it restricts the airflow. It must also fit in the horn properly. A mouthpiece, which goes into the horn too far, can make the tone fuzzy and “spread”. One, which does not go into the horn, far enough can make the high register difficult to play. The rim should be neither too wide nor too narrow and should not have sharp edges. A semi-flat, wide-ish rim is a good choice.
7. Customization: It is possible to upgrade factory made instruments and may be a good choice for some programs. These upgrades often include replacing the leadpipe, or modifying tuning slides. These changes will make for instruments, which is more responsive, easier to play and has a better scale. The overall tone quality will also be greatly improved.
8. Patterson Hornworks offers the following instruments:

Factory Made Horns: Hans Hoyer 6801/6802 German made, extremely high quality. An excellent buy at \$3100-\$3700. These horns are an excellent choice for middle school or high school players and are about the same price as American brands.

Hybrid Horns: We start with a specially ordered Hans Hoyer 6801/6802 and add our custom leadpipe, rebuild the main and aux F tuning slides, rebuild major sections of the instrument to remove inconsistencies in the bore. This instrument is recommended for serious high school players or entering college level players who want to have a career in music. These horns are a joint venture between Patterson Hornworks and the Hans Hoyer Co. Prices range from \$4950-\$5300

Custom Horns: Completely hand assembled by Patterson Hornworks. These horns have been called the “best horns in the world” by several of our customers. They are in everyday use in the recording studios in Los Angeles and several major symphony orchestras including the NY Philharmonic. These horns should be a serious consideration for any player wanting a career in music performance.

Upgradeability: We have the ability to upgrade a Hans Hoyer factory made instrument to either a Hybrid Horn or a Custom Horn. This is possible because we use Hans Hoyer valves. Numerous configurations are possible. We can customize these to fit the player’s needs.

If you have any questions, please contact us. We are happy to help you in any way. Visit our webpage at: hornworks.com

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Location and Section Set Up Of Horn Section For Concert Band

The location of your horn section in your band set up has a major effect upon the overall sound of your ensemble

1. Set up your horns so that they have no one behind them.

2. Make sure there is a wall (hard surface) behind them.

3. Put the chairs far enough apart to allow for resonance.

The set up within the section is very important in order to achieve a successful result.

1. The 1st horn should be to the left of the rest of the section (directors right)

2. The section should be seated in part order (1,2,3,4)

3. Putting the section in two rows is a good idea

The overall approach to section playing must be with the concept of balance and matching each other in all aspects of fundamental ensemble technique.

