

Embouchure

Despite what some people might say, I think it has been shown that a “good embouchure” on the horn is something that is extremely critical for success, and it is something that can be taught. In the old days, and that wasn’t that long ago, it was almost always assumed that if you gave someone a horn to fool around with, he would find his “natural” embouchure. Those who found a good “natural” embouchure had the most success. Others who didn’t were deemed “unsuited” to the instrument. Worst of all, many people in the business, teachers included, believed that you could not change a person’s “natural” embouchure. Stories abounded of players lost to failed embouchure changes. You might as well have had cancer of the lip or something. Fortunately, times have changed.

Back in the days of natural horns when horn players specialized completely as high or low players, the low players used the “einsetzen” or “setting in” embouchure, and the high players were often converted or versatile trumpet players who favored an “ansetzen” or “setting against” type of embouchure. The einsetzen embouchure had the mouthpiece set about half way up the lower lip so that it actually was “in” the lower lip. This gave a nice soft, warm sound and was great for low notes. The ansetzen embouchure had the lower lip all the way in the mouthpiece to supply strength and brilliance for the upper register. Both of these embouchures had the weakness of not being practical for “full range” horn playing. Usually a player who wanted to play the full range would have to shift from one to the other as the piece warranted. With the advent of the valved horn and Romantic composers who wanted to use the horn in new and exciting ways, it became clear that all horn players in a section would have to play the whole range of the horn.

While many players from earlier eras never made the switch to a truly all-purpose embouchure, by the middle of the last century there were attempts to analyze and explain how one could be an all around player by following certain rules of lip placement and muscle use. The most well known of these was the groundbreaking “The Art of Horn Playing” by Philip Farkas that published in 1956. I would recommend this book to any serious student of the horn. “The Art of Brass Playing,” another of his books, also has some great information on how certain principles apply to all brass players. I myself went to Mr. Farkas when I was having some embouchure problems and he was a great help. I’m not going to repeat everything in his book. What follows are some conclusions I have drawn from my own experiences and from teaching students with lips of all shapes and sizes.

Just remember that all the technical advice in the world will not take the place of your own skill in putting all of this together in a way that really works for you. If you have good placement and use your air, most of these things fall into place by themselves and all you have to do is be careful not to get into bad habits.

The embouchure is all about getting good vibrations. High, low, loud or soft, there must be a good vibration. The following information supports that concept.

1. There is a general setting that, if nothing else, is the best jumping-off point for anyone serious about playing the whole range of the horn.

This setting is found by setting the outside edge of the mouthpiece just above the muscle line that separates the red or inside of the lower lip from the facial skin outside the lip. This means that the mouthpiece is technically inside the lower lip but is as far down the lower lip as possible. The muscle line keeps the mouthpiece from going any lower (onto the facial skin) and provides a nice grip point for the embouchure.

The upper lip falls into the mouthpiece in a natural, relaxed manner. To find this position, have students close their mouths without any flex or other positioning. This is the same “normal” mouth position they would assume while watching television or reading a book— no tension or thought involved. Catch the outside edge of the mouthpiece on the lower lip muscle line from above and then just tilt the mouthpiece onto the lips. Make sure students do not move their lips during this process. I have found that many students want to move their upper lip up slightly as they feel the mouthpiece approach. *It is very important that this does not happen.* At this point, if you have done this correctly, you have found the “natural” starting position for the embouchure. If you have a mouthpiece that is

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big enough inside, this will put a bit or more of the skin above the upper lip in the mouthpiece. This is important. You don't want the mouthpiece setting into the upper lip. Let students feel this position without playing anything. Then have them just blow air with this setting. Finally, have them buzz a couple of easy notes before they try it with the horn. Ask them if this is different than what they have been doing. Usually they will say that the mouthpiece is "up higher" than before.

When you are playing, your lips should look essentially the same as when they are in the at-rest position. An obvious smile does not work. Neither does an obvious pucker. Maybe that's why Farkas recommended a "puckered smile."

One lip shouldn't disappear or pout out. The lips and teeth need to line up.

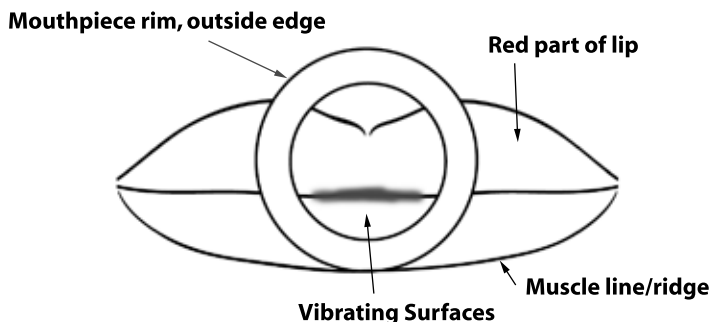
The amount of the red part of the lip showing outside the mouthpiece should be about the same as if the lips were just sitting there doing nothing.

2. "Two thirds upper lip and one third lower lip" doesn't really mean anything.

Although, as you can see, the illustration below does show a fractional lip relationship similar to 2/3 upper and 1/3 lower, this ratio can be achieved in a variety of ways, many of them bad. If you have a thick lower lip you could be setting way into the lower lip and have this ratio. You could be rolling your lower lip over your teeth and have this ratio. You could be setting into your upper lip and still have the "proper ratio." Other bad possibilities exist. Don't be fooled. Results are what count. The "ratio" is completely coincidental. I never use this terminology and I wish everyone else would quit doing it as well. It means nothing.

3. You need to have enough room in the mouthpiece to get the upper rim on the skin above the upper lip.

Although it is possible to play with the mouthpiece digging into the upper lip, it is not desirable for a number of reasons. If nothing else, it will decrease your potential endurance. The red part of the lip is just not meant for that kind of punishment. As you get older, serious injury is possible. "Setting in" also tends to pin the upper lip muscles, forcing the use of pressure to compensate for the fact that you can't work these muscles to help you move around on the horn, especially in the upper register and when doing lip trills. *The upper lip muscles must be free to move.* These are the "finesse" muscles of your embouchure. Many people with thicker lips who try to play on small or seemingly "normal" inside diameter mouthpieces will end up with the rim digging into their upper lip. They will



try to play on these mouthpieces, thinking that everyone else can or some great player is able to do it, and will experience much pain and frustration. I know this because I was one of those people. When you take your mouthpiece off after playing, look to see where the “mark” is on your upper lip. It should be up on the skin part.

4. If your lips are lined up evenly you will get a natural aperture for each note. You don't need to “hold open” an aperture in the center of your embouchure.

Most people have a natural overbite. This means that your lower teeth line up slightly behind your upper teeth. In order to have your lips line up one over the other, you must bring your jaw forward so that the teeth are lined up, too. A slight angle downward for the mouthpiece is normal, *but it must be defined by the teeth*. This puts an even pressure on both lips and gives your lower lip a chance to be the real strength and anchor for your embouchure. When the lips vibrate in proximity with each other, a natural aperture is formed. Get a mirror and check it out. You do not need to “hold open” an aperture or hole in the middle of your embouchure. This cuts down on vibrating efficiency and produces an airy sound. It will also cause problems in the upper register. You should, however, be very aware of the proximity of your vibrating surfaces and be able to make the vibration larger or smaller according to the range and dynamic you are playing. “Bringing in” the vibration from the sides as you go up is a good idea. I just object to the idea of “holding open” an aperture because for a lot of people this means moving the upper lip up a bit before they set, and this will pin the upper lip and reduce control of the muscles.

A very common thing to watch for is a slight upward movement of the upper lip just before you place the mouthpiece. This can be very bad. Let the upper lip fall into the mouthpiece. It may seem strange to people who have been doing this “lift” just before they play, but the overall improvement from not doing it can be substantial.

5. You need to keep control of your chin muscles, which actually helps you flex your lower lip.

Your chin should never be soft or take on the appearance of, as Phil Farkas would say, a peach pit. The chin muscles provide opposition for the lower lip muscles, just as the corner muscles control the amount of pucker, and balance the pull of some of the inside center muscles of the lip. Even on the lowest notes you need to keep corner control of the lips, or they will vibrate right out of the mouthpiece. As you go into the upper register, you want to flex your lower lip so that it becomes firmer and effectively goes higher into the mouthpiece. This, as opposed to trying to jam your lower lip into the mouthpiece as most people do when they first try to play up high. *Learn to flex the lower lip up as you pull the chin down*. This strong flex also protects your lower lip from pressure. Watch good brass players. They keep their chins flexed and under control. This flex, combined with the slight forward jaw position, gives us what Farkas called “the brass player's face.” The use of a mirror placed on the stand or a clip-on mirror can help solve the bunched or weak chin problem. By watching yourself in a mirror while playing, you get an instant visual feedback that will help you learn the feel of a flexed chin. As usual, find a note where the chin is properly flexed and work in both directions from there.

6. All the muscles around your embouchure need to be kept in place as you play.

If we talk about the chin and the “corners” of the mouth a lot, it is because these are perhaps the most critical of the facial muscles to be able to control. They are also the ones that are most often not under proper control. There are many more muscles in the face, however, and all these muscles play a part in holding together a good embouchure. The muscles outside the mouthpiece need to keep air pockets from developing, and, in the upper register, they need to become the “funnel of strength and energy” that supports the smaller flexes inside the mouthpiece. If you watch a great brass player play, you see little or no movement on the face outside the mouthpiece, but that doesn't mean there is no flexing of these facial muscles. Just the opposite is true. You don't want to over-tense and create undo strain, but you do need firmness appropriate to the range you are playing.

The amazing thing about many of these muscle “problems” or issues is that if you take a big enough breath just before you play, the natural thing for your body to do is to hold the muscles in place. This is part of what I call the “*natural process of horn playing*.” Given that we set ourselves up for success, the body will find the way to do it.

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7. Set on your lower lip first when you bring your mouthpiece up to play.

Although it may seem natural to set on the upper lip first and then bring the lower lip in, it is wise to learn to set from the bottom so that you get used to the feeling of a strong and supported lower lip. Many people who set from the top are not getting a good setting on the lower lip. It's going in as an afterthought. The upper lip has the natural support of the teeth. The lower lip needs the support of the teeth too. The lower lip needs your attention to make sure you are bringing your jaw out. The lower lip should feel like the anchor of the embouchure, not the other way around. This also helps you get the upper lip in the right position, since we are gauging the position from the bottom set point. It's easier to establish all this by setting from the bottom.

8. Higher vibrations are smaller vibrations and vice versa.

As you go higher, you must find a way to make the vibration smaller. Many people talk about making the "aperture" smaller. This is fine, especially if you think of bringing in the sides of the natural aperture as you get higher. Just don't take this to an extreme. To me it is just as important to think of simply bringing your lips closer together. Don't jam them together, just bring them into closer proximity. If your lips are lined up right and not overlapped, the vibration will continue as long as you do not overtighten or completely press the lips together. There is a magic spot for every note. By not having your upper lip pinned down and by being able to flex the lower lip up, you should be able to bring the lips closer together. But in any case, you should be able to feel that you are in control of the muscle movement and you are not just pressing harder. High playing is not a matter of strength. It is a matter of touch. (Just don't forget the air speed. We have been talking a lot about lips. Don't forget the air.)

8. Don't roll out your lower lip too much as you go down into the low register.

A slight rolling out of the lower lip, more like a slight puckering, can help a little as you go lower, but it should not appear as a rolled-over lip or a fold of skin under the mouthpiece. This often happens when you lose contact with your teeth against the lower lip. One of the biggest mistakes you can make is to let your lower lip float away from your teeth. It needs support just like the upper lip gets automatically. Relax the upper lip much more than the lower lip as you go lower in pitch. Remember, you will need to flex that lower lip to come back up in pitch, so if you soften it too much and lose contact with the teeth it will be impossible to get the flex back for a quick movement upward. The more you can keep your lower lip the same, the better. (A slight rounding or an "O" shape can help in the lower register.) Keep contact with the lower lip and the mouthpiece and teeth as you go lower. The corners of your mouth provide opposition to the relaxed lip muscles and provide constant control of the embouchure. If you tongue a series of low notes you should feel the corners holding.

I find that many people are actually loosening their lips too much as they go into the lower notes on the horn. Remember that if you had a guitar or another string instrument, there is only so much you can loosen a string before it quits vibrating all together. Use glissandos to find the least amount of "loosening" you need to get to the lower notes. This gives you control of the notes rather than just guesswork.

9. Moving the jaw down as you go lower is OK. Just don't overdo it.

I know there are some people who claim that they don't move their jaw down when they go lower. I just haven't met them. This is a natural process that works well if not overdone. It seems to lower the teeth against the lip and allow a larger vibration. The only problems arise when you have to make large leaps back and forth from low to high. This is why you want to minimize the movement. Practice doing jumps with increasingly large intervals and see if you can find the most efficient movement.

10. Think of rolling your upper lip under a little as you go higher.

To help make the vibration smaller and the lips closer as you go up in pitch, you can think of rolling your upper lip toward your teeth, as if you were making "chicken lips." If your embouchure is set up right, it will be practi-

cally impossible to actually do this, but the concept may help you *compact* the upper lip a little and get that higher, smaller vibration. I usually ask students to think of pointing down or reaching down with their upper lip. This is a subtle move, so you need to get across the concept of bringing the upper lip closer to the lower lip in some way. Sometimes we need more than one way to get a point across. Whatever you do, don't pull up your upper lip up as you go up. As a matter of fact, don't do this at all in any range except perhaps a little in the lower register. I call this "rabbitting" the upper lip. It doesn't work anyway.

11. Remember that whatever embouchure you use, it will work better with proper air flow: No embouchure will work without air speed.

I always have to make sure that students who are working on embouchure issues keep concentrating on their air flow. It's easy to get distracted. When you match up proper air speed with a good embouchure, things start to fall in place almost automatically.

12. If you are working on an embouchure change, be patient.

It's not fun. Start with your midrange and work outwards in both directions. Simple long tones and scales, or parts of scales, are best. Take plenty of rests. Fatigue will bring back old habits. Use a mirror for nonverbal, subconscious feedback. Move gradually so that you don't fall back into bad habits. Go back into your archives and play easy pieces, range-wise. Feel the air flow. Think positively. Remember that your playing is going to be so much better once you get through the transition. A lot of students don't want to change because they are playing 1st horn in their school band or youth orchestra and they would have to move down to a lower part. (Yes, it is easier to do an embouchure change on a lower part.) It's hard for them to accept the situation. You must ask them if they really want to play the full range of the horn and/or if they have any higher playing aspirations. If this is a real problem, work on the change during the summer or at a time when their music is easiest. At one college where I was teaching, I had to get permission from the orchestra director to help a student because the director didn't want to lose the player to a lower part, even for a little while. This was a college freshman! We went ahead with the changes and a year later both the student and the conductor were happier and this student went on to play professionally.

Many years ago, a lot of people in the business felt that it was not possible to change one's embouchure and make it back to play professionally. Thank goodness these kinds of superstitions have been laid to rest by modern teaching techniques. I am one of the survivors and I wouldn't have it any other way. If you hear this kind of talk you must ignore it. Most of the students who come to me have embouchure problems, if only small ones. Some are simple to fix and some take more time, but with the help of a qualified teacher, you can reach your full potential as a player.

13. One or two small caveats.

There are a few teachers out there who seem to be more preoccupied with a proper looking embouchure than the results that students are getting. Results are what count. You must, however, be honest with yourself about whether you are getting the results you want. If you are not sure about whether you should make an embouchure change or not, it might be wise to get more than one opinion. I don't like to get mixed up with other teachers' students and their problems, but I will venture an opinion if the answer is fairly clear cut and I have seen the person play, with the admonition that students should try to work this out with their current teachers. Sometimes though, you just need to get some different help. I need to see and hear someone play to make an evaluation. It's not possible to make a valid judgement without that personal contact. You can't do this work in internet forum discussion groups, either. I *am* currently using video conferencing to give lessons and consultations on the internet, but even with this technology there are limitations.

Embouchure Photos



My Embouchure at Work

Above Left: Playing a second line G. Notice that you can see both lips on the sides of the mouthpiece. This is proper jaw position— slightly forward. Even with the beard you can tell the chin is flexed and the upper lip is inside the mouthpiece. There is very little tension, but the face *is* firm.

Above Middle: Playing a pedal C: There is more lip visible (especially the upper lip), the jaw and corners have dropped a little and the embouchure is now more rounded, but the position of the mouthpiece has not changed and the lips are still even— thus there is still pressure on both lips. Keep the chin and corners firm so you don't float the lower lip away from the teeth when you play low.

Above right: Playing a high A. Not much difference. The corners are a bit higher and there is slightly more tension noticeable in the whole area, but the basic embouchure stays the same.



Embouchure Don'ts

Left: Here the lower lip is tucked over the teeth and has started to disappear. The setting has lost its anchor point and has moved down to the facial skin below the lip. This makes a good vibration difficult because the upper lip will overlap the lower lip and cut off the vibration.

Center: It may be difficult to see, but the mouthpiece is now actually set into the upper lip, which is just peeking over the top of the mouthpiece. The muscles of the face are pulled up. This will "pin" the upper lip muscles.

Right: This is the move some people make as they bring their mouthpiece up to play that pulls the upper lip up and into a bad, "pinned" position. This photo is exaggerated but notice the muscle-pull between the corners and the nose. Even in small amounts, when seen as the set is made, this is a telltale sign of pulling the upper lip up too far.



How to Find the "Natural Setting"



Clockwise from Upper Left: (1) Lips in normal rest position. Note no flexing of any kind. This is where you start. (2) Mouthpiece set on lips, still in normal rest position. Notice how you can still see the lips at the sides of the mouthpiece. (3) Setting the mouthpiece on the lower lip first with the lips in normal rest position. *Notice the mouth is closed. This makes sure that you get the upper lip into the mouthpiece correctly.* (4) Another view of setting on the lower lip first and rolling the mouthpiece onto the upper lip. Here you can see how the outside edge of the mouthpiece is set just above the muscle line between the facial and lip surfaces. When you do this, make sure you don't pull the upper lip up just before you play.