

Cymbal Crashes Without Air Locks

BY SAM DENO

Everyone has heard it. It is the bane of all cymbal playing! When it happens, it immediately brands its perpetrator as either an amateur or inexperienced cymbal player.

Of course, I am referring to that phenomenon that occurs when two cymbals are brought together with the intent of producing a splendid crash, but all that results is a muffled thud. It is an event that all of us would like to avoid whenever we play cymbals.

We have all either heard it or produced it ourselves at one time or another. What locks the cymbals together like that and prevents the beautiful crash we really wanted? To understand this phenomenon we have to understand how a cymbal crash is properly produced, as well as what happens when cymbals lock together to produce that ugly thud.

A properly produced crash, using time and distance to develop sufficient velocity, brings both cymbals together in a manner that allows the air between the plates to readily escape. An air lock occurs when the edges of the two plates are exactly parallel as they attempt to meet and pass each other. The resulting sliding motion traps the air between them, producing the thud that invariably sends hackles up the backs of our necks. Yikes!

As we all know, the underside of a cymbal is concave, or curved like the inside of a sphere. If the air is trapped between the cymbals, it cannot vibrate and radiate outward. It is that vibrating and radiating air that brings the sound of our cymbals out of these bronze plates.

Cymbalists have developed a number of methods to avoid this phenomenon, and those methods are all based on bringing the plates together so that they are *not* precisely parallel to each other at the moment of impact. Whatever means is used to avoid an air lock, it is extremely important that it becomes a subconscious, consistent motion in our cymbal playing style.

The means I have used throughout the years calls for the production of what sounds like a flam when the cymbals meet. If we listen closely, and hear “c-rash” when the cymbals meet, there will be no locking. When the cymbals are about to meet in front of me, their positions look somewhat like a V that is tilted to my right. That is, the edges are not parallel to each other.

Because I am right-handed, the plate in my right hand is coming up and in, while the plate in my left hand is coming down and in. The bottom edge of my left plate contacts the plate in my right hand about an inch or two above its lower edge. As they continue on their paths, the plates fully come together and then separate in a single motion that allows all the air between them to escape.

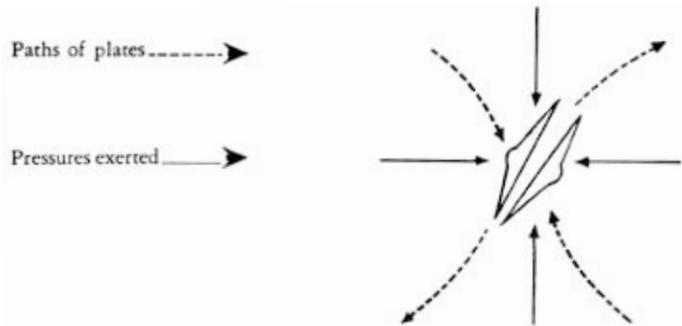
The description of the motion I use sounds fairly simple, but executing it consistently is a goal that is always in my subconscious as I perform. Regardless of the means you may use, you must also keep it in your subconscious. That is how we avoid an air lock while playing cymbals. The air lock is a cymbal playing hazard we can all avoid, if we make the effort.

I cannot overstress the importance of establishing a consistent means of producing cymbal crashes, not only to avoid producing air locks, but in terms of developing a reliable means of produc-

ing the best sound possible from cymbals.

The method I use is to tilt the cymbals to my right, because I am right-handed. I attempt to equalize the velocity of each plate as it accelerates to meet its mate. To do that, I use my stronger right hand coming up and in, to overcome gravity. My weaker left hand, which is traveling down and into the point of impact, has gravity to assist it. That is how I equalize the velocity of each plate into the point of impact.

The cymbals are tilted to my right for still another reason. All other factors being equal, the more severely I tilt my cymbals to the right, the greater will be the amount of metal that I bring to bear into the crash. I call that the “dynamic angle” because the greater the angle the cymbals are tilted, the greater will be the resulting volume. Remember, it is the velocity and angle, not the force used, that produces the greater volume. That can be more readily understood when one views the accompanying diagram that illustrates the various forces that come to bear when producing a cymbal crash. (If you are left-handed, everything I have mentioned above is just the opposite.)



As percussionists, we would all love to be ambidextrous. The reality, however, is that most of us are not, and therefore we have to use the abilities we do have, along with observing the laws of motion, to realize the best possible advantage. We all need to silently say a special “thank you” to Sir Isaac Newton for helping us understand the universal laws he discovered so long ago.

Hopefully, you now know how to avoid air-locking your cymbals, and have some additional knowledge to assist in developing a style that will help produce the best results. Once that style is developed, consistency in its use really pays off. Without that consistency, the dreaded air lock will continue to wait in the wings for all of us, hoping we foolishly fall prey to that ever-present hazard of cymbal playing.

Sam Denov was a percussionist and timpanist with the Chicago Symphony Orchestra for 31 years, retiring in 1985. Denov is the author of the concert cymbals method *The Art of Playing the Cymbals* and is featured in the video *Concert Percussion, A Performer's Guide*, both distributed by Warner Bros. Honored many times, he has performed on many Grammy Award winning recordings and been seen and heard on television, radio, and in live concerts throughout the world. He keeps busy performing, writing, and lecturing throughout the United States. PN