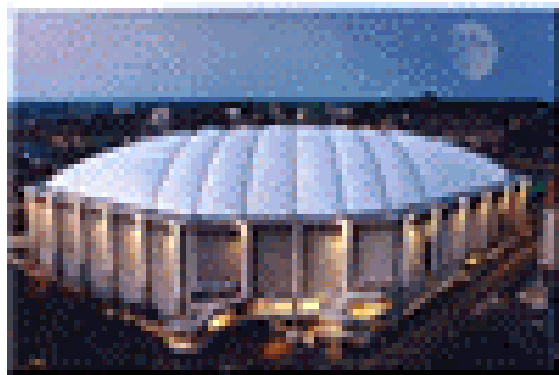


# Working in A Domed Environment

A White Paper By DJ Montalbano



## Introduction

It is a cool autumn day, and your entire band is out on the field, along with the rest of your organization. It's the day before one of your major regional marching band competitions. Here you are with your entire staff working on ensemble balance, projection from the percussion, timing control issues, and anything that may need tweaking. Finally, the rehearsal's end arrives and you find yourself on the bus with your organization en route to the task of the evening.

When your band gets on the field, you and your staff decide to head upstairs to witness the show from a judge's standpoint. Ofcourse you would like to get the full effect! The show begins and things are just not right! You can see the faces of individuals in your ensemble working just as hard as they always do in rehearsals and they seem a bit relaxed yet a bit aggressive. They are working just as normal, but all of the important things including balance, timing, and projection just are not better, in fact they are worse! Then you look up and realize you are in a Domed arena. *What went wrong?*

## The Basics

In terms of marching percussion, working outside may prove VERY different from that of a Domed arena. Here, I hope to deal a bit with the important aspects of the activity which designers and percussion coordinators should be very concerned about with a performance scheduled in a Dome.

Many times, designers and arrangers wish to use the percussion section as support for wind arrangements and tend to want to 'hide' your players backfield. A well-rounded section must be capable of playing ahead of the beat when backfield. The interesting issue here is that when performing outside, the marching battery may be able to hear better, enabling them to adjust better to tempo issues. In a Dome environment, by contrast, it is very difficult to hear anything but the players immediately around you. Telling players to play less with what they hear, and more with what they see (i.e.- the drum majors) can help greatly. On the other hand, placing the percussion too far in the front of the field brings up the opposite staging effect. Players must be able to play behind the beat so as not to sound 'early.' Thus, telling players to play more with what they hear, and less with what they see can help as well.

There are many interesting things to note about marching percussion inside a domed arena. Timing issues are generally the first things noticed. Correcting these can simply be a matter of teaching students to play ahead or behind what they see in their conductor. Another issue that becomes strikingly obvious lies in ensemble balance. In a domed environment, sounds produced by the ensemble do not bounce off the stands and disappear as they might outside. In this situation, we often find that the sound 'bounces' around a bit longer than you might expect. In fact, we can learn a great deal about where the sound is going simply by playing an accented note on a snare drum and listening to the effects. Another interesting effect is the lowering of pitches during the decay of the sound waves. For example, you may notice an entire band playing a chord and a sudden cutoff allows you to hear the pitch decay, yet you'll notice they go flat after a minimal amount of time. For the marching battery, playing in a domed arena can be a very unique experience for players (particularly younger players). Taking notice of some effects such as these can greatly allow a program coordinator to make necessary adjustments.

## The Real-World Experience

The Syracuse University Marching Band has its roots and home rehearsal as well as performance facility in the famed Carrier Dome. For the percussion ensemble, taking the effects the building offers into consideration is an ongoing process. Understanding the tendencies of each instrument in the battery and pit sections helps the players to understand how to produce a more successful performance with a fairly high degree of consistency.

The battery sections as a whole are faced with dramatic projection problems. One such problem faced for the Syracuse program is the fact that inner beats and lower volume levels tend to easily get lost and covered up by the building. For example, accent to tap patterns within the battery sections tend to become difficult to understand due to the fact that inner beats get drained out to the ear. The accents tend to be fine, but that is generally all you hear! In order to compensate for this, players must learn to play with better quality of taps and we insist on bringing the tap stick heights up to three inches (3"). Focusing on this quality of lower note levels makes for increased audible sense in the percussion scoring.

## The Ensemble Breakdown

In terms of the individual sections of the battery, the domed environment tends to cause problems for the snare line. At Syracuse, the snares use kevlar heads, and the sound we strive for is a crisp, clean, articulate snare sound which does not lack quality of 'snare' sound. A problem encountered with this setup is that of projection. In fact, the drums project a bit too much! In order to create a more balanced ensemble sound, we find that the dryer we make the snares, the better our results. This is so because we find the more 'wet' the sound, that is--the looser the snare strands are--the more difficult it is for the players to balance the ensemble sound. It is often the case that instructing the snares to play half-way between the center of the head, and the rim for a particular phrase, solves balance problems. Instructing the players to play in different areas of the head does alleviate many design constraints in terms of field placement. Investigate the possibilities for different parts of the musical program.

The tenor line has its own unique set of problems under the roof. The most obvious of these is this--YOU CAN'T HEAR THEM! Simply, working on increasing the quality of sound each player gets out of the drums, and incorporating the proper playing zones instruction, proves to be the best way to balance this section. For the Syracuse program, much of the dynamic contrast we must create usually incorporates the tenor line playing at an elevated level. For example, the tenor line may play a mf passage at f while the rest of the ensemble is playing at a mf level. Outside, when we practice this, things may seem horribly out of balance, but when we go inside, the increased volume out of the tenor voice creates a highly balanced percussion ensemble. These balance problems seem to be reduced when switching from the 6", 8", 10", 12", and 13" drums to the 6", 10", 12", 13", and 14" drums. As well, deeper shells seem to help, so you might want to consider a manufacturer like Pearl, or Ludwig, or placing scoops on the tenors in the domed environment.

The bass drum line also has its unique effects. Inside, we notice that the bass line usually tends to sound incredibly 'boomy'. For the Syracuse ensemble, finding the right balance of drum size to pitch ratio is important. We tend to use an 18", 20", 24", 26", and 28" drum array. These drums provide the ability to create the volume we may desire, yet they allow us to tune them high enough that the drums can be muffled so as not to produce the 'boomy' effect. On the other hand, when the drums are outside, they easily get lost in the ensemble. This is the tradeoff made due to the

increased number of performances in the domed arena. Tuning according to the performance setting is recommended.

The marching cymbal section is probably the most interesting color with the arena because of the short decay of the instruments' sound. The impacts of the cymbal crashes tend to be fine audibly no matter what volume level is written, but the problems come in with length of decay. An orchestral crash tends to sound shorter as the softer end of the decay gets lost audibly. The best way to handle this seems to be to incorporate a larger cymbal line. The increased size can allow the section to play softer yet allows for a better chance at increased duration of the cymbal decay due to more sound-wave 'power' being created. That however, is a physics problem in itself, so we can spare the explanation! Also, having one player march with 'China' cymbals may help.

The pit ensemble tends to have some interesting effects as well. In terms of projection, the pit ensemble usually does very well. The higher mallet instruments and metallic instruments tend to project with great ease. In fact, instructing players to play at lower, more controlled levels may be necessary. For the other mallet instruments, increased projection is usually desired. The marimbas and the like tend to be less audible and oftentimes selecting a harder mallet is the answer. However, having more players play the lower-pitched keyboard instruments can obviously help projection. The auxiliary instruments tend to do well also, but for the pit in general, increased listening skills are usually required, as it is incredibly easy for an ensemble to get ahead of the battery on the field behind them. Stressing the importance of listening backfield and playing to what they hear is usually very successful. As well, encourage some auxiliary parts to be played while actually turning their heads to see the feet of the battery for increased sense of pulse.