

The History and Development of the Front Ensemble in Drum Corps International

D.M.A. Document

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Musical
Arts in the Graduate School of The Ohio State University

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2016

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Abstract

This document is an examination of the history and development of the front ensemble in Drum Corps International (DCI.) The front ensemble can be defined as the group of stationary percussion instruments and electronic instruments that are a part of a marching music ensemble. Today the front ensemble is a major part of every drum and bugle corps, and plays a large role in the “pageantry arts.”

This study provides the first known documentation of the front ensemble’s history. It will include discussion of the development of performance, instrumentation, and the evolution of the musical function of the front ensemble. This document also includes a detailed catalogue of the instrumentation for every front ensemble competing in Division I and World Class DCI Finals.

This document will be beneficial to those seeking to learn more about the front ensemble, marching percussion, or marching music in general. It will serve as a reference for students, educators, and historians. This study may also serve as a resource for further research of marching music and percussion.

Acknowledgments

I would like to acknowledge the many people who have made this document, and more importantly this degree possible. Without your guidance, encouragement, patience, and the occasional reality check, none of this would have been possible.

First I must thank my wife, Ashley. Without you in my life, I would not have made it here today. I would like to thank my mom, Toni, for taking me to drum corps shows since I was a baby. Thank you for driving me to my first drum corps audition, and continuing to come on tour with me thirteen years later. Without you, mom, I would not have music in my life today. I would also like to thank my dad, Wendell, who's support and encouragement have never wavered.

I would like to thank Dr. Susan Powell and Joseph Krygier for having such a positive impact on my musicianship, teaching, and life in general. I would also like to thank my committee members: Dr. Thomas Wells, Dr. Caroline Hartig, and Dr. Scott A. Jones. Thank you for your support and guidance as I have been working toward this goal.

I would like to thank everyone who helped me complete this study. Thank you James Campbell, Erik Johnson, and Matthew Ryan Kilgore for giving me your time and allowing me to interview you for this project. Thank you Dan Acheson and everyone at DCI. Thank you Steve Vickers and anyone who contributes to *Drum Corps World*.

A huge thanks must go to Jeff and Vicki McFarlane, and Dave Nelson at the Colts

Drum and Bugle Corps. Thank you for allowing me to continue to do what I love, by giving me the opportunity to teach the corps. Thank you to everyone I teach with. There are too many of you to name; however, I will name a few: Jeremy Gurganious, Drew Brown, Zac Jansheski, Brandon Smith, Steven MacAlpine, Danielle Marquardt, Brady Hartness; thank you for encouraging me to complete this journey.

Thank you Lee Allman, Jon Honeycutt, Mario Marini, Juan Mendoza, Nomi Marcus, Ryan, Drew, Megan, Tommy, Steven, Kate, everyone who hangs around “the ranch,” the staff at Gallo’s, the Rhythm X Groupme, the OSU Percussion Studio, and all of my friends that have kept me sane as I pursued this dream. I am sorry I talk about band so much.

Thank you “Chill Line,” and everyone else I have ever had the pleasure of marching with. Thank you to anyone that has tolerated living with me on a tour bus for the summer. Thank you every pit instructor I have ever had. You have all changed my life.

Finally, I would like to thank all of my students at the Colts and Rhythm X. The interest you have shown in this project has been very motivating while I have worked to complete it. Most of all, thank you for your excitement about music and performing. I cannot express how much I enjoy every opportunity I get to stand in front of you.

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Fields of Study

Major Field: Music Performance

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Chapter 1

Introduction

The front ensemble can be defined as the group of stationary percussion instruments and electronic instruments that are a part of a marching music ensemble. The front ensemble became a part of every drum and bugle corps competing in Drum Corps International (DCI) in the early 1980s. Throughout its thirty-five year history the front ensemble has developed into a legitimate ensemble where percussionists play concert instruments outdoors on the competitive marching field, with applications that are transferable to other musical genres.¹ With the incorporation of amplification, performers today are playing as maturely as collegiate and professional musicians. Front ensemble performers have evolved from “drummers,” to general percussionists, to multi-percussionists, and to the specialized musicians of today. The instrumentation of the front ensemble has expanded greatly throughout its history.

The front ensemble has evolved from a novelty section that provided color and support, into a musical force that has an equal voice as the other musical sections in the drum and bugle corps. Today the front ensemble has the ability to support the entire drum corps for extended periods of time. This was made possible through the addition of

¹ Jim Ancona and Jim Casella, *Up Front: a complete resource for today's pit ensemble*. Portland, Or: TapSPACE Publications (2003): Introduction.

amplification and electronic instruments. The introduction of electronic instruments infinitely expanded the sonic possibilities of the front ensemble.

This document traces the development of front ensemble instrumentation and includes a detailed instrumentation catalogue for every front ensemble appearing in DCI World Class and Division I Finals from 1974 to 2015. Discussion of the development of mallet instrument performance in the front ensemble, and the evolution of the musical function of the front ensemble is also included.

Purpose of the Document and Need for Study

The purpose of this document is to provide a general outline of the history and development of the front ensemble in Drum Corps International (DCI.) Founded in 1972, DCI is the most prominent drum corps organization in the world. With an estimated 330,000 spectators attending live performances during the 2015 Drum Corps International fifty-three day summer tour,² the depth and reach of its influence on the music and marching community is immeasurable.

There is a significant body of literature written on drum and bugle corps. Most of that body consists of periodical articles that provide a general history within the activity. There are also several books that focus on the history and heritage of the drum and bugle corps activity. The most thorough source on drum corps history is *A History of Drum &*

² Chris Weber, "Attendance records set across 2015 Drum Corps International Tour." http://www.dci.org/ViewArticle.dbmlSPSID=965782&SPID=166025&DB_LANG=C&ATCLID=210283444&DB_OEM_ID=33500 (accessed August 26, 2015).

Bugle Corps, published by Steve Vickers in two volumes (2002, 2003.)

The existing scholarly writing on drum and bugle corps is limited. Dennis E. Cole's dissertation "What Is a Drum Corps? Reinterpreting Traditions Inside the Musical Community" examines the polarization of ideology among the drum corps community (tradition vs. innovation.) Cole's dissertation provides a broad history of drum corps, but focuses on just one drum corps to illustrate his point. Gene Barrett's MM thesis, published in 1986, focuses on "The Historical Development of Drum and Bugle Corps with a Focus on Kansas."

There are two published papers that focus on the integration of electronics in the front ensemble, one published by Erin Maher (2011) and the other by Chris Koenig (2014.) There are periodicals that discuss the beginning of the front ensemble and trace its early developments, however there are no published materials that provide a complete history of the front ensemble. Such a study will stand as a resource for percussionists, educators, and historians leading to a greater understanding of the history of the front ensemble.

Procedures and Methods Used

The procedures used to complete this document include the survey of video recordings of drum and bugle corps performances, which was the primary method of research. Interviews were also conducted with drum corps designers, instructors, and performers. Steve Vickers' *A History of Drum & Bugle Corps* (2002, 2003) served as a resource for the general history of drum corps. Dennis E. Cole's dissertation, Erin

Maher's thesis, Chris Koenig's publication, and various periodical articles that focus on marching percussion were also used for reference. The author's personal experience also served as a resource for this study

Parameters and Scope of Study

Early in the research process it was determined that a wide-scale study of the history of the front ensemble would be unrealistic, as there are too many high school marching bands, high school indoor percussion ensembles (indoor drum lines), independent indoor percussion ensembles, and drum and bugle corps to include in one document. The decision to focus on the history and development of the front ensemble only within Drum Corps International was made based on the author's personal experience with the drum corps activity, and the need to limit the amount of material being studied.

There are multiple levels of competition within DCI. Currently DCI is structured into "World Class" and "Open Class," which replaced the old three-division competitive class system. Because World Class/Division I receives much more attention than lower-ranked competitive classes, and many of the innovations and developments occur first at the highest level of competition, this study primarily focuses on top-ranked corps competing in Division I or World Class.

This document focuses on the general history and development of the front ensemble in Drum Corps International. It traces the evolution of the instrumentation, the development of performance and compositional style, identify key individuals that helped

shape the modern front ensemble, and provides a chronology of key historical events. While names of some individuals will be included, a complete documentation of every instructor or designer who contributed to the development of the front ensemble is outside of the scope of this study. This document will not include a detailed discussion of musical developments or arranging styles, but instead will focus on the general development of the front ensemble.

Organization of Document

This document is comprised of six chapters. Chapter One states the purpose of this document, outlines the procedures and methods used in the study, defines the parameters and scope of the study, and describes the organization of this document. Chapter One also includes a concise history of the drum and bugle corps activity, from its roots after World War I through the foundation of Drum Corps International. Chapters Two through Six are organized chronologically. Each chapter outlines general developments, and discusses changes in instrumentation and performance.

Chapter Two describes the introduction of pitched marching percussion instruments from 1974 to 1977. Chapter Three focuses on the time period from 1978 to 1981, which is significant because for the first time drum corps were competing with stationary percussion instruments on the field. Chapter Four begins in 1982 with the wide establishment of the front ensemble and concludes in 2003. The “age of amplification” is covered in Chapter Five, beginning in 2004 and concluding in 2008. The last chapter, Chapter Six, focuses on the “age of electronics” which began in 2009. This time period is

characterized by the use of electronic instruments.

Appendix A includes a detailed documentation of the instrumentation of marching pitched percussion sections, and front ensembles that competed in DCI World Class or Division I finals from 1974 through 2015. This appendix will also include information on the setup each ensemble used, and the number of performing members in each ensemble.

Appendices B, C, and D include transcripts of interviews conducted during this study.

Appendix E includes email correspondence from Michael Boo.

Definitions

Corps - Synonym for *Drum and Bugle Corps*.

Division I - The competitive division within Drum Corps International used prior to 2008 that is reserved for the most advanced groups.

Drum and Bugle Corps - A musical marching ensemble that consists of brass instruments, percussion instruments, electronic instruments, and a color guard.

Drum Corps - Synonym for *Drum and Bugle Corps*.

Drum Corps International (DCI) - The governing body for junior drum and bugle corps.

DCI Finals – A term used to refer to last performance of the Drum Corps International competitive season for the top-twelve Division I or World Class corps.

Drum Line – A general term used to refer to the marching percussion section of a drum and bugle corps or marching band. A drum line is typically comprised of multiple snare drums, tom-toms, bass drums, and crash cymbals.

“Electronics” vs. “Amplification” - “Electronics” is a general term used for electronic instruments. “Amplification” is a general term used for the amplification of acoustic instruments or the human voice.

Front Ensemble - The group of stationary percussion instruments and electronic instruments that are a part of a marching music ensemble.

Horn Line – The section of a marching music ensemble that is comprised of brass instruments.

Indoor Drum Line/ Indoor Percussion Ensemble - A general term used for marching percussion ensembles that compete indoors during the winter.

Junior Corps - A modern drum and bugle corps whose membership is limited to those under the age of twenty-two years.

Kelon - A synthetic wood used on mallet percussion instruments manufactured by the Musser Mallet Company.

Klyperon - A synthetic wood used on mallet percussion instruments manufactured by J. C. Deagan Inc.

Senior Corps – A modern drum and bugle corps whose membership is not restricted by age.

World Class - The competitive division within Drum Corps International that is reserved for the most advanced groups. This system of competitive division began in 2008.

Concise History of Drum and Bugle Corps

Drums and bugles have been used by military units for centuries. Functional in their use, these instruments were used to signal troops and communicate battle commands in addition to being used as ceremonial instruments. By the early twentieth century technological advancements made their use in battle obsolete,³ however these instruments continued to be used in ceremonies and parades.

Today's drum and bugle corps can trace their roots to the U.S. Veterans returning home from World War I. As these men and women returned from war they sought ways

³ Erin Maher, "The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition," (MA Thesis, University of North Carolina at Chapel Hill, 2011), 6.

to engage “with their communities while maintaining a connection to military traditions and values.”⁴ Local Veterans organizations such as the Veterans of Foreign Wars (VFW) and the American Legion (AL) began to sponsor drum and bugle corps. Not long after Veteran’s organizations began sponsoring drum corps other community organizations like churches, Boy-Scout troops, Rotary Clubs, Knights of Columbus, and fire and police stations began sponsoring drum and bugle corps.

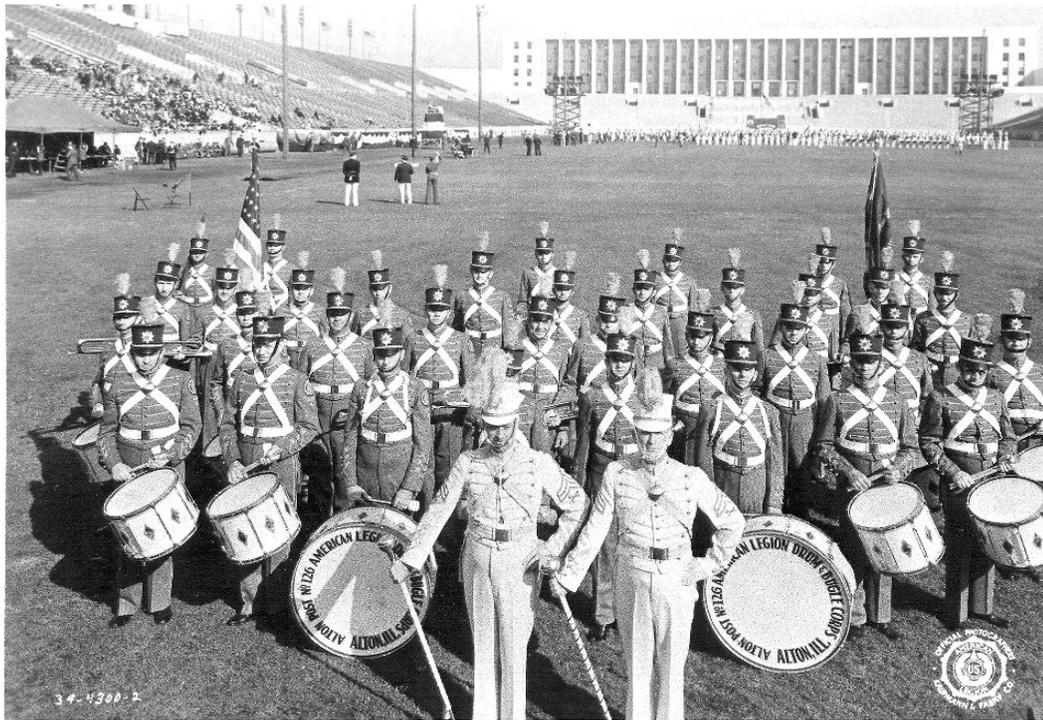


Figure 1: Alton American Legion, 1939 American Legion Nationals at Soldier Field in Chicago, IL. (Photograph used with permission from *Drum Corps World*, Madison, WI, photo from the archives of Bob Zinko.)

⁴ Ibid, 8.

The first American Legion Drum Corps Championship was held in 1921, taking place in Kansas City, Missouri. The VFW held their first drum corps competition as a part of their 1928 National Convention in Indianapolis, Indiana.⁵ Members of all performing drum corps were required to be military Veterans and official members of the Veteran's organization sponsoring the corps.⁶

In an effort to pass on the goals and ideologies of their Veteran's organizations to younger generations, the American Legion created the Sons of American Legion (SAL) in 1932.⁷ This new youth organization began conducting their own ceremonial events and parades, giving birth to a new group of drum and bugle corps. In 1934 the SAL held its first Junior League Nationals Drum Corps Competition in conjunction with the American Legion National Convention. During this time, the original drum and bugle corps began to be known as "senior corps" and their younger counterparts were known as "junior corps."⁸

Junior drum and bugle corps at this time were activities promoted with the intention of "keeping kids off the streets." Many performers joined corps with little or no musical experience. "Instructors during this time could hardly read or write music

⁵ Dennis E. Cole, "What is a Drum and Bugle Corps? Reinterpreting Traditions Inside the Musical Community," (Ph.D. diss, Kent State University, 2009), 55.

⁶ Ibid, 56.

⁷ Ibid, 62.

⁸ Ibid.

themselves, having earned the position as ‘instructor’ after years of active participation in the corps.”⁹

Many junior and senior drum and bugle corps competitions were cancelled between 1942 and 1945 as a result of World War II. The end of the war, however, brought a new group of Veterans who “strived to preserve the ideologies of their military predecessors.”¹⁰ These circumstances led to a rising number of drum and bugle corps, and drum corps activities and competitions across the United States. This trend continued into the 1950s and 1960s, an era that is often referred to as the “Golden Era” of drum and bugle corps. The drum and bugle corps activity reached its peak in North America in the mid-1960s, as nearly 7,500 drum and bugle corps had come into existence.¹¹

Each Veteran’s organization had a separate set of rules used in their national competition. In 1932, the All-American Drum and Bugle Corps and Bands Association was founded “with the goals of developing a standardized rule system and ensuring consistency in judging.”¹²

As tensions mounted among veterans’ organizations, Drum Corps Associates (DCA) was founded in 1963 as a new competitive circuit for senior drum and bugle corps competition. The goal of this new organization was to improve standards in drum corps competition. In 1972 Drum Corps International (DCI) was founded so junior corps could

⁹ Ibid, 69-70.

¹⁰ Ibid, 69.

¹¹ Ibid.

¹² Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 9.

operate independently from Veteran's organizations. The founders of DCI were frustrated with restrictions that stem from governance by organizations whose primary purpose was not drum and corps competition.¹³

From the 1920s through the 1950s drum corps performances lasted around thirteen to fifteen minutes, with marching drills based on standards in military manuals.¹⁴ The musical repertoire consisted of marches specifically composed for ceremonial field units, and signal calls. Competitions included an "on the line inspection" during which uniforms, haircuts, instruments, posture, and other related qualities were judged. Competitions often included a parade.

In the 1960s, drum and bugle corps began experimenting with performance practices. Many corps began to abandon traditional parade formations and combined them with vertical, horizontal, and diagonal drill formations.¹⁵ Corps' music repertoire also began to broaden during in the 1960s.

Drum and bugle corps were limited in the instruments they were allowed to use. Until the 1960s they were restricted to drums, cymbals, and bugles. The percussion section of these units comprised of a drum line only. From the 1920s through the 1940s these drum lines were relatively large, usually consisting of ten snare drums, several

¹³ Ibid, 11.

¹⁴ Dennis E. Cole, "What is a Drum and Bugle Corps? Reinterpreting Traditions Inside the Musical Community," (Ph.D. diss, Kent State University, 2009), 60.

¹⁵ Ibid, 71.

tenors drums (snare drums without snare guts on the bottom head,) bass drums, and marching cymbals.¹⁶

In the 1950s the percussion sections of drum and bugle corps were much smaller, typically made up of three snare drums, three tenor drums, a bass drum, and a crash cymbal.¹⁷ In the 1960s the size of these drum lines began to grow in size,¹⁸ expanding the instrumentation with the introduction of the rudimental bass drum, tonal bass drum, and marching tom-toms. In 1968 marching timpani began to be used by drum and bugle corps. Table 1 illustrates the trends in percussion instrumentation from the 1940s through the 1970s, using information from an article on marching percussion written by Lauren Vogel Weiss.¹⁹

1940s

8-10 Snare Drums

4-5 Tenor Drums

4 Bass Drums

4 Cymbals

Continued

Table 1: The average instrumentation of percussion sections in drum and bugle corps from the 1940s to the 1970s.

¹⁶ Lauren Vogel Weiss, "Marching Percussion in the 20th Century." *A History of the Drum & Bugle Corps*. Steve Vickers, editor. (Madison, WI: Sights & Sounds, Inc., 2002), 91.

¹⁷ Ibid, 92.

¹⁸ Ibid.

¹⁹ Ibid, 93.

Table 1 Continued

1950s

3 Snare Drums
3 Tenor Drums
2 Bass Drums
1 Cymbal

1960s

4 Snare Drums
4 Tenor Drums
2 “Straight” Bass Drums
2 “Rudimental” Bass Drums
3 Cymbals

1970s

6-10 Snare Drums
3-5 Tom-toms/trios
4-6 “Tonal” Bass Drums
4 Cymbals
4-5 Marching Timpani
2-4 Marching Keyboards



Figure 2: Percussion section of the Toronto Optimists, Toronto, ONT, 1969 (Photograph used with permission from Drum Corps World, Madison, WI, photographer unknown.)

In 1968, the Racine Kilties started an instrument revolution in drum corps. They were the first drum and bugle corps to incorporate timpani into their drum line.²⁰ In 1969 marching mallet percussion instruments were used by a drum and bugle corps for the first time. The Boston Crusaders were the first junior corps to use xylophone in competition.²¹ In the same year the Sunrisers were the first senior corps to use mallet percussion instruments. The Anaheim Kingsmen also used mallet percussion instruments this season, however they discarded the instruments before VFW Nationals.²² There was no further research conducted to determine if these drum corps, or others, continued to use mallet instruments or timpani until Drum Corps International permitted the use of marching mallet percussion instruments and accessory percussion instruments in 1974.

For many, instrumentation is an important part of the identity of the drum and bugle corps activity. The rules of competition regulate what instruments are allowed, or are not allowed to be used by drum and bugle corps. Any developments or changes in the instrumentation have not been made without some level of resistance.²³

²⁰ Steve Vickers, *A History of Drum and Bugle Corps*, (Madison, Wi: Sights and Sounds Inc., 2002), 112.

²¹ Jeff Hartsough and Derrick Logozzo, "The Timeline of Marching and Field Percussion: Part 4." *Percussive Notes* 33, no. 1 (February 1995) 28.

²² Steve Vickers, *A History of Drum and Bugle Corps*, (Madison, Wi: Sights and Sounds Inc., 2002), 113.

²³ Erin Maher, "The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition," (MA Thesis, University of North Carolina at Chapel Hill, 2011), 11.

Chapter 2

1974-1977

The modern front ensemble was preceded by performers who marched on the field carrying many of the instruments found in the “pit” today. The introduction of pitched marching percussion instruments in Drum Corps International began with timpani in 1972. It was followed by the introduction of glockenspiel (bells) and xylophone in 1974. The marching vibraphone and marching marimba were first used in 1977. All of these instruments were carried by the performers, either by strapping the instruments to their bodies or by carrying them on a harness. Hand-held percussion instruments were also incorporated in 1974. Chapter Two focuses on these developments taking place in DCI from 1974 to 1977.

Because all instruments had to be carried during this time, creative methods were devised to incorporate instruments that were not designed to be marched. Some drum corps went to extreme lengths to incorporate new percussion sounds. The Kingsmen used two chime notes mounted off the side of the xylophone in 1974, the Cavaliers strapped chime notes to the backs of cymbal players, and the 27th Lancers marched a set of chimes in 1975. These sounds were often low quality and far from ideal, however they were sounds that had never before been used by a drum and bugle corps which allowed a larger variety of music to be performed.

Marching Timpani

When Drum Corps International was founded in 1972, it allowed the use of timpani in competition. The Anaheim Kingsmen, the first DCI champions, had five marching timpanists in 1972. By 1974, most of the drum corps competing in Drum Corps International had four timpani players. The Kingsmen and the De La Salle Oaklands each had five timpani players in 1974, while the Purple Lancers had only two. Because the video from this year is incomplete it is unknown if the Cavaliers, Blue Devils, or Blue Stars marched timpani in 1974. In 1975 every drum corps competing in DCI Finals marched either four or five timpani, with the exception of the Racine Kilties who marched six.

The individuals marching timpani were often not trained timpanists, but rather drummers who did gain a position on the drum line.²⁴ The timpani were carried by straps around the performers neck, each performer carrying a single drum. Michael Boo, who marched as a member of the Cavaliers from 1975-1977, describes what it was like to march timpani:

“Those of us in the activity who played these instruments were he-men and she-women of extreme strength, Olympics-ready due to our training to carry these unnatural instruments for hours on end... Having a timpani in front of one’s body was like carrying a sack of potatoes strapped to one’s neck.”²⁵

²⁴ Robert Morrison, “The Development of the Front Percussion Ensemble,” *Percussive Notes* 23, no. 5 (July 1985), 32.

²⁵ Michael Boo, “Pit Stop: A Front Ensemble Premier.” *Fanfare*. DCI.org. April 28, 2004. http://www.dci.org/news/print.cfm?news_id=44ef0078-3ace-4a55-b801-ce976eb04405 (accessed September 10, 2015).



Figure 3: Marching Timpani, 1972 St. Paul Scouts. (Photograph used with permission from Drum Corps World, Madison, WI, photo by Jane Boulen.)

Unlike the majority of timpani found in a concert hall which use a pedal to control the pitch of the drums, the timpani marched in drum corps were cranked by hand. Because the timpani did not have tuning gauges and many of the timpani players were not classically trained musicians with a developed ear and a strong concept of tuning and pitch, performers would gauge how far they should crank the drums by counting the number of turns rather than listening to the pitch.²⁶ These performers spent as much time

²⁶ Ibid.

cranking the drums to change pitch as they spent actually playing the drums. Tuning gauges were incorporated in the late 1970s, although not all drum corps could afford new instruments.

Marching timpani in a drum and bugle corps was very different than playing timpani in a concert hall. Because the primary concern of playing timpani was the projection of sound, the technique used would not be appropriate in an orchestral or concert setting. The timpanists at this time used a lot of arm, playing very heavy into the drums. Because of the proximity of the drum to the performers body, the performers had to play on the far side of the drum. The mallets used were also much more articulate (often wood or very hard felt) than mallets typically used in a concert setting.

Timpani in drum corps during this time were mostly used to add support to the music ensemble, often doubling lines played by the low brass. Timpanists had to allow time for tuning, which affected what could be written for them. During moments of the show that did not include brass instruments, such as the percussion feature, the timpani would serve as a melodic bass line. Performers would often sit all of the timpani down on legs for a portion of the show; they would be played by one performer while other timpanist played hand held percussion instruments.

Marching Mallet Percussion

In the winter of 1973 Drum Corps International created a new rule that would influence competition the following summer by expanding the percussion instruments that were allowed to be used on the field, they however had to be carried at all times. In

1974 drum corps were allowed the use of two mallet percussion instruments in DCI competition.²⁷



Figure 4: Marching bells with strap carrier, Black Diamond Regiment, 1976. (Photograph used with permission from Drum Corps World, Madison, WI, photographer unknown.)

The two mallet instruments most commonly being used were a 2.5 octave xylophone and a 2.5 octave set of bells. Both of these instruments were worn with a strap around the performer's neck. These marching instruments are different than concert

²⁷ Steve Vickers, *A History of Drum and Bugle Corps*, (Madison, WI: Sights and Sounds Inc., 2002), 121.

instruments because of their limited pitch range. They were also made with lower quality materials, in an effort to make them more durable outside on a performance field.

The two major manufactures of marching mallet percussion instruments at the time were J. C. Deagan Inc. and the Musser Mallet Company.²⁸ The set of marching bells used in this time had a range of two and half octaves, G3 to C6 (sounding two octaves higher than written). The Deagan model #1576 Marching Bells were made out of steel, weighing 23.5 pounds without the carrier.²⁹ Musser produced two different sets of marching bells. The M-69 Marching Bells were made of steel and weighed 25 pounds, the M-65 bells were made of aluminum and weighed 18 pounds.³⁰ The marching bells functioned as the soprano voice of the marching keyboard ensemble. These instruments were usually played with a plastic mallet, or a hard rubber mallet.

The marching xylophone served as the alto voice of the marching mallet quartet. The marching xylophone had a range of two and a half octaves, C4-C6 (sounding one octave higher than written).³¹ The Deagan 877 Marching Xylophone did not have resonators, it had Klyperon bars and weighed 28 pounds.³² The Musser M-67 Marching Xylophone had resonators, was made with Kelon bars, and also weighed 28 pounds.³³ Musser did produce a xylophone model without resonators, the M-66.³⁴

²⁸ Lauren Vogel, "Marching Mallet Percussion," *The Instrumentalist* (May 1981), 48.

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid, 48-49.

³² Ibid, 49.

³³ Ibid.

³⁴ Ibid.

Again, because the video is incomplete it is unknown if the Cavaliers, Blue Devils, or Blue Stars used mallet percussion instruments in 1974. Of the remaining nine drum corps competing in DCI Finals this year, four had a xylophone player and a bell player. The Madison Scouts had only a xylophone player, while the Muchachos and the Kilties had only a bell player. Phantom Regiment and the De La Salle Oaklands did not use mallet instruments in 1974. Table 2 illustrates the use of pitched percussion instruments of drum corps competing in the 1974 DCI Finals.

Corps	Mallet percussion	Timpani
Santa Clara Vanguard	Bells, Xylophone	4
Madison Scouts	Xylophone	4
Kingsmen	Xylophone (w/ 2 chime notes), Bells	5
Muchachos	Bells	4
Troopers	Bells, Xylophone	4
Kilties	Bells	4
De La Salle Oaklands	None	5
Cavaliers	Unknown	Unknown
Blue Devils	Unknown	Unknown

Continued

Table 2: The pitched percussion instrumentation of drum corps competing in the 1974 DCI Finals.

Table 2 Continued

Corps	Mallet percussion	Timpani
Purple Lancers	Bells, Xylophone	2
Phantom Regiment	None	4
Blue Stars	Unknown	Unknown

In 1975 seven of the twelve drum corps competing in DCI Finals used both xylophone and bells. Phantom Regiment and the Garfield Cadets used only one set of bells that year, while the Troopers used only a xylophone. Table 3 illustrates pitched percussion instruments that were used by drum corps in the 1975 DCI Finals.

Corps	Mallet Percussion	Timpani
Madison Scouts	Xylophone, Bells	5
Santa Clara Vanguard	Bells, Alto Bells	4
Blue Devils	Xylophone, Bells	5
27th Lancers	Bells, Chimes	4
Blue Stars	Xylophone, Bells	4

Continued

Table 3: Pitched percussion instruments used by drum corps competing in the 1975 DCI Finals

Table 3 Continued

Corps	Mallet Percussion	Timpani
Oakland Crusaders	Xylophone, Bells	5
Kilties	Xylophone, Bells	6
Cavaliers	Xylophone, Bells	4
Royal Crusaders	Xylophone, Bells	4
Phantom Regiment	Bells	5
Garfield Cadets	Bells	4
Troopers	Xylophone	4

There were two other percussion innovations that occurred in 1975. The first of these was accredited to the Santa Clara Vanguard (SCV) who used a set of alto bells for the first time in DCI Finals competition. "SCV's founder and director Gail Royer found an old set of Deagan alto bells in his junior high band room. Because they were bells and not vibes, he was able to put them on the field in 1975, the year SCV used two metallic (instruments.) The alto bells sounded very much like vibes because they were an octave lower than regular bells."³⁵

The second innovation occurring in 1975 is attributed to the 27th Lancers, using

³⁵ Michael Boo, Email correspondence with the Author, February 24, 2016.

chimes that were built on a marching rack. “The chime rack was technically a bongo rack with chimes, not a chime rack with bongos, which supposedly got around the rule of the day that bells and xylophones were the only legal ‘mallet keyboards’ allowed on the field.”³⁶



Figure 5: 27th Lancers marching chimes and bells, 1975. (Photograph used with permission of Drum Corps World, Madison, WI, Photographer unknown.)

The chime tubes were mounted in a straight line in front of the performer, the set had only eight notes. Edward Jaquez describes how the chime rack was built:

³⁶ Edward Jacques, “Where are they now? 1975 27th Lancers Chime Cage.” *DCI Fanfare*. October 13, 2006. http://www.dci.org/news/view.cfm?news_id=10ba1079-da44-4531-8b90-2760e0daab3b (accessed February 24, 2016).

“I built that chime rack in my basement. I was an apprentice toolmaker at the time. There were constraints with the project. I didn't have much money, it had to be strong, but as light as possible, and time was a factor. The construction materials used on the rack were: parts of an old baby crib frame and an old cooler, some one-inch aluminum angle stock, nylon strapping, a large assortment of fasteners, some padding and some paint.

I was allowed to use the milling machine, saw and drill press at work to manufacture the components. The chimes themselves were not all that heavy, just thin-walled chrome-plated brass tubing, and the bongos were light. The unit in its entirety might have weighed 60 to 70 pounds and was a little top heavy.”³⁷

The playing techniques used for these marching mallet instruments was different than techniques commonly used in a concert setting. Arm motion was restricted due to the strap around the neck supporting the instrument, mallet players could not move their arms side to side. This restriction meant that performers had to learn to play moving only their wrists.³⁸ Some mallet percussionists positioned their elbows in front of the support strap to ease the restriction of arm movement. Their arms were parallel with the edge of the keys between the upper and lower manual.

In 1977 vibraphone and marimba were allowed to be used in DCI competition.³⁹ These instruments would, however, still have to be carried. The marching marimba served as the tenor voice in the marching mallet quartet. The Deagan 678 model Marching Marimba ranged from C4 to D6, had an arched set of resonators and was made

³⁷ Ibid.

³⁸ Michael Boo, “Pit Stop: A Front Ensemble Premier.” *Fanfare*. DCI.org. April 28, 2004. http://www.dci.org/news/print.cfm?news_id=44ef0078-3ace-4a55-b801-ce976eb04405 (accessed September 10, 2015).

³⁹ Ibid.

with Klyperon bars.⁴⁰ The Deagan marimba weighed almost 37 pounds.⁴¹ The Musser M-63 Marching Marimba had a range from C4 to C6, was made with Kelon bars, had a set of resonators, and weighed 38 pounds.⁴²

The marching vibraphone served as the bass voice in the marching mallet quartet. The Deagan 578 Marching Vibraphone weighed 36 pounds. It had a range from F3 to G5, was made with aluminum bars, arched resonators, and included a battery-operated motor.⁴³ The Musser M-64 Marching Vibraphone had a range from F3 to C6 and weighed 40 pounds. The Musser vibraphone also had resonators, aluminum bars, and a battery-operated motor.⁴⁴ Both of these vibraphone models came with a damper bar.⁴⁵

There were two different methods of building damper bars on a marching vibraphone. The most common models had a bar on the player's side that expanded the full length of the instrument. The bar was pressed down with the wrist to dampen the ringing notes. Other models had a lever on the low end of the keyboard that resembled a "whammy bar," like that of an electric guitar. Performers moved their left hand over and pressed down the lever, muting the sound. Ringing notes were also often dampened with the hand or fingers.

The mallets used on marching mallet instruments were commonly much harder, and more articulate than those used in a concert setting. These mallets were primarily

⁴⁰ Lauren Vogel, "Marching Mallet Percussion," *The Instrumentalist* (May 1981), 49.

⁴¹ *Ibid.*

⁴² *Ibid.*

⁴³ *Ibid.*

⁴⁴ *Ibid.*

⁴⁵ *Ibid.*

used in an effort to produce a louder sound that would project in large open air venues. Mallets used on marimbas, vibraphones, and xylophones were often hard rubber, plastic, brass, or aluminum. While using articulate mallets did help to project the sound, the sound quality was very bright and brittle. Marching mallet instruments have been compared to sounding like music coming out of an ice cream truck.⁴⁶

Three of the drum corps competing in the 1977 DCI Finals would use a marching marimba. These corps were the Blue Stars, Cavaliers, and Seneca Optimists. There were also three drum corps who used a marching vibraphone in 1977. Table 4 illustrates the pitched percussion instruments that were used by drum corps in the 1977 DCI Finals.

Corps	Mallet Percussion	Timpani
Blue Devils	Xylophone, Vibraphone	5
Phantom Regiment	Bells, Xylophone	5
Santa Clara Vanguard	Bells, Vibraphone	5
27th Lancers	Bells, Vibraphone	5

Continued

Table 4: Pitched percussion instruments used by drum corps competing in the 1977 DCI Finals.

⁴⁶ Campbell, Interview with the Author, November 6, 2015.

Table 4 Continued

Corps	Mallet Percussion	Timpani
Madison Scouts	Bells, Xylophone	5
Blue Stars	Bells, Marimba	5
The Cavaliers	Bells, Marimba	5
Capital Freelancers	Bells, Xylophone	5
Seneca Optimists	Bells, Marimba	4
Kilties	Bells, Xylophone	4
Crossmen	Bells, Xylophone	4
Garfield Cadets	Bells, Xylophone	4

Accessory Percussion Instruments

Another change occurring in the 1974 DCI season was the incorporation of accessory percussion instruments. The accessory instruments that are now common in the front ensemble were initially used by members of the drum line, mallet, or timpani players. The most commonly used accessory instruments include, but are not limited to: cowbell, woodblock, ratchet, claves, vibraslap, slapstick, güiro, various shakers, triangle, tambourine, and tam-tam.

These instruments, like all others, had to be carried by the performers. Accessory instruments were often placed in a stick/mallet bag that was attached to a drum, or they

were shoved into the back pocket of a uniform. The performers would pick up the hand held instruments, play them for a short amount of time, and place them back in their pocket or mallet bag.

Various cymbal sounds were achieved differently during this time. Aside from the crashes played by the marching cymbal line, any suspended cymbal rolls, ride cymbal patterns, crashes with sticks, or high hat patterns all had to be played by someone marching in the drum line. The marching cymbal line extended their arms, holding their cymbals in the air to be played by performers holding sticks or mallets. Timpani players often played suspended cymbal rolls, while the snare drummers and tenor drummers usually played any ride cymbal patterns, crashes with sticks, or high hat patterns. Open and closed high hat sounds had to be controlled by the cymbal player holding the cymbals, who manipulated the sound by pushing the cymbals together or pulling them apart.

In 1976, the 27th Lancers had a performer on the field who marched a tam-tam. The percussionist carried it by their side, holding the tam-tam by the string in one hand with a mallet in the other hand as they marched around the field. When it came time to play the tam-tam, the performer would hold it as high in the air as they could and play it.

Another interesting use of percussion instruments during this time period was the use of hand percussion instruments, such as bongo and conga. There were a few drum corps that had marching conga lines. Some of these corps include the 1974 Americanos and the 1977 Seneca Optimists, who also had a marching bongo line. These instruments, like all of the other instruments during this time, were attached to a harness and marched

by the performers. These instruments were often played with sticks so that they could be heard on the field. When the drums were played with hands, it was nearly inaudible.

Musical Developments

Because of their limited sound output, timpani and mallet percussion instruments were limited in how they could function within the drum corps music ensemble. The complexity of the music written was also restricted by physical limitations involved with marching bulky instruments. In addition to these factors, the playing ability and experience level of performers was limited. This all led to mallet percussion and timpani being primarily used as color instruments.

Marching mallet percussion instruments and timpani have a limited sound output that will only travel a short distance in large open air venues, such as a football stadium. These instruments mainly reinforced, or added color to the brass by simply doubling their musical lines. The following quote from Michael Boo in an article published for DCI illustrates this point:

“Writing early mallet parts was simple. The arranger doubled everything in the horn line, whether it should have been doubled or not. And then, for effect, the xylophonist was asked to fill in the gaps between snare diddles, flying over the keyboard with an impressive display of chops and a total disregard for musical sensitivity. As one of those players, I can attest to this.”⁴⁷

⁴⁷ Michael Boo, “Pit Stop: A Front Ensemble Premier.” *Fanfare*. DCI.org. April 28, 2004. http://www.dci.org/news/print.cfm?news_id=44ef0078-3ace-4a55-b801-ce976eb04405 (accessed September 10, 2015).

If the timpani or mallet percussion were featured in the music, they had to be one of the only voices on the field playing in order to be heard. This was often done during a percussion feature of the show where mallet percussion and timpani would provide the melodic material. There were restrictions on where these performers could march on the field. The instruments had limited projection and had to always be staged in the front of the field.⁴⁸

The music written and performed was largely influenced by the physical limitations that come along with marching heavy and bulky instruments. These instruments bounced around while the performers were marching, making it difficult to accurately strike the instrument. The performers could hardly move their arms, being restrained by the carrying straps. This resulted in writing that was fairly simple.

A “T-brace” marching carrier was developed for marching mallet instruments in 1976-1977.⁴⁹ This was a significant development because it freed the arms of performers, allowing a slightly more comfortable playing technique. T-brace carriers made mallet percussion instruments easier to march, which directly influenced their mobility and the difficulty of the marching maneuvers that could be executed. These new carriers were also healthier for performer’s bodies. While the T-brace carrier did improve conditions, it did not have a significant impact on the difficulty level of music written, or how the instruments functioned in the music ensemble.

⁴⁸ Campbell, Interview with the Author, November 6, 2015.

⁴⁹ Michael Boo, “Pit Stop: A Front Ensemble Premier.” *Fanfare*. DCI.org. April 28, 2004. http://www.dci.org/news/print.cfm?news_id=44ef0078-3ace-4a55-b801-ce976eb04405 (accessed September 10, 2015).



Figure 6: Marching bells with a “T-brace carrier.” (Photograph used with permission from Drum Corps World, Madison, WI, photo by Ed Ferguson.)

Mallet percussionists who had to carry their instrument played with two mallets for the vast majority of the time. When four mallets were used the technical vocabulary was very limited, most often rolling on four-note chords or striking four notes in a chord at once. The majority of four mallet playing was done using a cross grip.

The musical repertoire of drum and bugle corps at the time limited the amount xylophone could be used as a featured instrument, simply because the sound and style of playing did not fit appropriately with a lot of the music being performed. Occasionally, a drum corps would feature a xylophone player as a soloist during their show. The Madison Scouts had only one xylophone player in 1974, he was featured as a “rag time” soloist for extended portions of the show.

In addition to the physical limitations from marching a mallet instrument, much of what could be written for the mallet percussion instruments during the 1970s was limited because of the ability level of the performers. Many marching mallet sections were made up of performers who were often not talented enough to make the marching drum line.⁵⁰ Additionally the instructors who were teaching the mallet players were often not educated on those instruments, primarily being drummers who taught the drum line.

The ability to use a wider variety of percussion instruments during this time in DCI opened up new opportunities for music arrangers. With the ability to use hand held accessory percussion instruments, Latin music was programmed more frequently by drum corps. The incorporation of more percussion instruments would ultimately broaden the sounds that were available for use by drum corps, expanding the drum corps musical repertoire.

⁵⁰ Robert Morrison, "The Development of the Front Percussion Ensemble," *Percussive Notes* 23, no. 5 (July 1985), 32.



Figure 7: Members of the Argonne Rebels, 1975. Marching timpani, bells, and cymbals taking a break during rehearsal. (Photograph used with permission from Drum Corps World, Madison, WI, photo by Jane Boulen.)

Chapter 3 *1978-1981*

DCI made two significant rule changes in the winter of 1977 that took effect during the 1978 summer tour. These rule changes would quickly set into motion the creation of the front ensemble. The first change increased the maximum number of mallet players allowed on the field from two, to four performers. This led to many corps having a set of bells, a xylophone, a marimba, and a vibraphone on the field.

Another rule change allowed groups to start their show from anywhere on the field. Prior to 1978 every performer, and their instrument, had to start the show from behind the back sideline. This change was very significant because for the first time, percussion instruments could be left on the field for the entire performance. This led to the use of stationary percussion instruments, and ultimately to the creation of the front ensemble.

Expanded Marching Mallet Percussion Sections

In 1978, half of the drum corps competing in DCI Finals had four mallet players. The standard instrumentation for most mallet sections included a marching bell set, one marching xylophone, one marching marimba, and one marching vibraphone. The Madison Scouts were the only group that continued to march the old standard configuration of one marching bell set and one marching xylophone in 1978.

In 1978 Spirit of Atlanta used a unique marching keyboard instrument. They created an instrument that had a vibraphone and a marimba back-to-back. The performer could “flip” the keyboard over and change instruments. In the same year the Guardsmen had two marching xylophone players. This is significant because for the first time we see multiple mallet percussionist playing the same part on the same instruments. Multiple performers playing the same instrument is something that will later be a defining characteristic of the modern front ensemble, having several performers playing the same part in an effort to project the sound. In 1979 only five of the twelve drum corps competing in DCI Finals used four marching mallet instruments.



Figure 8: 1978 Beverly Crusaders marching percussion section. (Photograph used with permission from Drum Corps World, Madison, WI, photo by Ed Ferguson.)

The musical role of marching mallet instruments had not changed much since they were first introduced into DCI in 1974, still primarily functioning as color instruments who would also add support to melodic lines. James Campbell was asked in an interview: “what were some challenges or limitations of writing for marching mallet-percussion and marching timpani?” Mr. Campbell responded:

“In the pre-pit era the challenges included the limitations of range (smaller for mallets) which placed most of the mallet keyboards in the same tessitura. Everything you wrote for them sounded like an ‘ice cream truck’ going through your neighborhood... The weight of carrying these instruments bordered on child abuse (so heavy to march/rehearse with)... The instruments had limited projection and had to always be staged in the front of the field.”⁵¹

Stationary Percussion Instruments

The most significant change taking place during the 1978 season was a rule that allowed groups to start their show from anywhere on the field, giving corps the opportunity to pre-stage percussion instruments. This rule change was very significant as it led to the use of stationary percussion instruments, and ultimately paved the path to the modern front ensemble. The drum corps who used stationary percussion instruments during the time gave us the first glimpse of the front ensemble.

Making percussion instruments stationary would relieve mallet percussionists and timpanists of the physical burden of marching their instruments. Drum corps were able to start using higher, concert-quality instruments which had a wider range. In the upcoming years composers would start writing more complex parts, writing things that were

⁵¹ Campbell, Interview with the Author, November 6, 2015.

previously impossible. The front ensemble would start to become a section of their own within the drum corps, along side the drum line, and the brass line.⁵²

James Campbell, one of the individuals responsible for the incorporation of stationary percussion instruments in drum and bugle corps, was asked: “what led you to start experimenting with grounded percussion instruments?” His response was:

“We only had one player audition for the timpani/keyboard section. I also started to score for more percussion colors outside of the normal marching percussion palette (chimes, crotales, shakers, suspended cymbals, gongs, congas, bongos, brake drums, concert bass drum, etc...). It seemed ridiculous to have to hang something on a marching member to get them to be used.”⁵³

In 1978 only four drum corps (Kilties, Guardsmen, North Star, and the 27th Lancers) took advantage of the new DCI rule and used stationary percussion instruments. Of these four groups, only two (27th Lancers and Kilties) used the stationary percussion instruments for the entire show. The Kilties were the first drum corps to use pedal timpani, placing a set of drums at the front of the field.

Guardsmen, whose percussion section was under the direction of James Campbell, had a set of concert chimes on the front sideline centered on the fifty-yard line. The chimes were only used in a few moments of the show; they were played by a performer who marched up to the front of the field.

North Star used stationary percussion instruments in multiple ways in 1978. They started the show with one performer playing a set of five hand-cranked timpani at the

⁵² Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 20.

⁵³ Campbell, Interview with the Author, November 6, 2015.

front of the field. These timpani were eventually picked up and marched as a marching timpani line. They also had four stationary percussion stations at the front of the field, which were initially played by the other four timpanists. Once they were marching the timpani, members of the drum line came to the front and played at the stationary percussion stations. The four stations included a set of “junk metal” percussion instruments, a set of timbales, temple blocks, and a pair of small single-headed toms.

The 27th Lancers placed two timpanists on the field in 1978, one on each forty-yard line. They each had a set of three hand cranked timpani, which were marching timpani that had been sat down on their legs. This could be considered a candidate in the argument of the first front ensemble, because it was the first time stationary percussion instruments were used for an entire show by multiple performers.

The experiments with stationary percussion instruments in 1978 were considered to be a failure at the time.⁵⁴ In 1979 Jim Campbell decided to continue experimenting with the concept of a front percussion ensemble.⁵⁵ Mr. Campbell was asked why he thought the 1978 experiments were considered a failure, his response was:

“Maybe for the activity, but not for me. I think the additional cost, storage room, transportation, personnel needed to stage them at shows - all were problems to overcome. Most corps didn’t want to bother.”⁵⁶

⁵⁴ Tom Scheffler, “The first pit performer and the birth of the pit.” *Fanfare*. DCI.org. May 13, 2005. http://www.dci.org/news/view.cfm?news_id=7e8122fc-9a5c-4ce1-b5a2-53bf2d21f37a (accessed April 23, 2015).

⁵⁵ Ibid.

⁵⁶ Campbell, Interview with the Author, November 6, 2015.

When asked why he continued to experiment with stationary percussion instruments, Mr. Campbell would explain that:

“I was a college percussion teacher. These ‘pit’ instruments were part of teaching and performing in my career. It was natural for me.”⁵⁷

In 1979 the Guardsmen were the only drum corps to use stationary percussion instruments for the duration of their show. The Guardsmen had one percussionist who stood at the front of the field playing timpani, congas, chimes, and various other percussion “toys.”⁵⁸ This “ensemble” could be considered primitive in comparison to the front ensembles of today; and ironically included only one performer for the majority of the show. Even though this performer never moved, he still marched in place, or “marked time” for the entire show.

In addition to the stationary percussionist, the Guardsmen marched two xylophones, one set of bells, and one vibraphone. Near the end of the show one of the xylophone players marched to the front of the field, took their instrument off, and played a concert marimba. This was the first time a concert marimba was used by a drum and bugle corps. The marimba was four octaves, and had synthetic (Kelon) bars. The marimba player, David Sander, played a four-mallet accompaniment to the corps’ closer

⁵⁷ Ibid.

⁵⁸ Tom Scheffler, “The first pit performer and the birth of the pit.” *Fanfare*. DCI.org. May 13, 2005. http://www.dci.org/news/view.cfm?news_id=7e8122fc-9a5c-4ce1-b5a2-53bf2d21f37a (accessed April 23, 2015).

Greensleeves.⁵⁹ The Guardsmen were the only drum corps in the 1979 DCI Finals that did not have a marching timpani line.



Figure 9: Stationary hand-cranked timpani used by the Stallites, year unknown. (Photograph used with permission from Drum Corps World, Madison, WI, photo by Ed Ferguson.)

There were three other drum corps who also used stationary percussion instruments in 1979, although they were not used for the entire performance. The Cavaliers had a set of concert chimes on the field. During part of their show, a xylophone

⁵⁹ Ibid.

player took off their instrument and played *Somewhere Over the Rainbow* on the chimes. Phantom Regiment had a tam-tam that was laid down on the the front sideline; it was picked up and played by a drum major. The Bridgemen had a suspended cymbal on a stand by the front sideline, it was played by a timpanist during the percussion feature of the show.

In 1980 a consistent trend of placing timpani on the front sideline was led by the Blue Devils.⁶⁰ In 1980 the Bridgemen, Crossmen, Cavaliers, Garfield Cadets, and Guardsmen also used stationary timpani, although they were all hand-cranked drums. The timpani used in these shows were played by multiple people during the performance, often by more than one person at a time. According to James Campbell, the timpani writing did not change from the marching instruments to the grounded instruments “until we moved away from the hand-crank timpani. When the use of balanced-action pedal timpani came into place, the instruments became melodic, almost virtuoso in nature when compared to their use in the standard symphonic literature.”⁶¹

The Blue Devils were leaders in the trend of using stationary timpani because they were the first group to consistently use balanced action, or pedal timpani. In 1981 half of the drum corps competing in DCI Finals used balanced action timpani.

Although this ensemble had only two performers, the Crossmen could receive credit for having the first front ensemble in 1980. In addition to using stationary timpani,

⁶⁰ Robert Morrison, “The Development of the Front Percussion Ensemble,” *Percussive Notes* 23, no. 5 (July 1985), 32.

⁶¹ Campbell, Interview with the Author, November 6, 2015.

the Crossmen used a stationary concert vibraphone. This was the first time a concert vibraphone was used by a drum and bugle corps, and the first time a performer played a stationary keyboard percussion instrument for an entire drum corps show. This was also the first time an ensemble used more than four mallet percussionists at once, using a marching glockenspiel, marching vibraphone, and two marching marimbas in addition to the stationary vibraphone.

In 1980 only half of the drum corps competing in DCI Finals had a marching timpani line, the following year (1981) only three drum corps had a marching timpani line. Drum corps would phase out the use of marching timpani in the following years.

In 1981 the Garfield Cadets placed five members at the front of the field who played stationary percussion instruments, bells, vibraphone, xylophone, and timpani. The mallet percussion instruments were all “marching instruments” placed on a stand that remained stationary the entire performance. In addition to the mallet instruments, they used a set of five timpani which were all played by one performer. The Garfield Cadets also had a percussion station with an assortment of small drums and cymbals. This percussionist played a lot of the accessory and hand percussion parts that would have previously been covered by the marching drum line.

Spirit of Atlanta also used stationary percussion instruments in 1981. This ensemble had three members who played timpani, vibraphone, and xylophone. The timpani consisted of a set of four balanced action drums. The xylophone and vibraphone were both concert instruments. This was the first time a drum corps had more than one

concert mallet instrument on the field. The developments of using station percussion instruments in the following years would lead to an explosion of the front ensemble.

The 1981 Bridgemen show was unique because for the first six minutes of the show, the mallet percussion instruments (one glockenspiel, xylophone, and vibraphone) were stationary on the front sideline. Half way through the performance three members put the keyboard instruments on carriers and marched out onto the field, stepping into the role of a “traditional marching mallet player.” The Bridgemen also used stationary timpani in 1981, having four hand-cranked timpani that were played by two different performers. They also had a stationary set of timbales in addition to a variety of hand held percussion instruments.

The Cavaliers used a drum set in 1981. This was the first time a drum set was used in DCI Finals. It was a standard five-piece drum set with a snare drum, two rack toms, and a floor tom. It had high-hats, a ride cymbal, and crash cymbals. The drum set was not used the whole show, only during the corps performance of *Sing, Sing, Sing*. The drum set was played by the drum major.

The last instrumentation development occurring in 1981 is attributed to the Sky Ryders, who used a stationary bass marimba in addition to a set of three hand-cranked timpani. This was the first time a bass marimba, or any extended range keyboard instrument was used by a drum and bugle corps. The marimba was played by the timpanist. Because of the bass marimba’s limited volume, it was difficult to hear over the rest of the ensemble.

The 1981 Cadets front ensemble was the first group of instrumentalists to perform an entire drum corps show without a shako. “Shako” is a term that refers to the hat that is an important part of any drum corps uniform. Front ensembles would gradually stop wearing shakos as a part of their uniform. By 1984 only half of the front ensembles in DCI Finals wore shakos. In 1985 there were only four front ensembles wearing shakos; in 1986 only the Troopers and the Madison Scouts wore shakos. Many drum corps choose not to dress their front ensemble members in shakos because they felt it gets in the way of their visual performance. The Madison Scouts continued to keep shakos as a part of their front ensemble uniform until 2004; although they would wear them again in 2008.

Musical Developments

Although stationary percussion instruments were used, they would not immediately influence a major change in the way music was written for percussion instruments. Stationary percussion instruments during this time were primarily used to support or add color to a melodic line, or to provide “percussion colors outside of the normal marching percussion palette.”⁶² The ability to use stationary percussion instruments provided opportunities to use instruments that were previously unavailable because of the logistics involved with being required to march any instrument being used.

At this time the front ensemble rarely functioned as a featured voice in the music ensemble, rather it provided support to the music ensemble by doubling brass material,

⁶² Campbell, Interview with the Author, November 6, 2015.

often used to add color to a pre-existing melodic voice. Because of the limited sound output from the keyboard instruments, they rarely received the primary musical role of the ensemble. If they were the main melodic or musical focus, the brass had to be scored very thin to allow the keyboard voices to be prominent.

The First Front Ensemble

Although the “pit box” which officially established the front ensemble was not be created until 1982, there are multiple drum corps that could receive credit for having the first front ensemble between 1978 and 1981. There are a few factors that must be considered while answering the question: “who gets credit for having the first front ensemble in DCI?” Two guidelines that share fundamental traits of today’s front ensemble have been chosen. First, the instruments must be used for the entire performance, and they must remain stationary. Secondly, the “front ensemble” must be made up of multiple performers. Considering the fact that many front ensembles throughout history did not setup, or remain in the “pit box” in front of the front sideline, field placement will not have any factor in determining who should receive credit for having the first front ensemble.

The 27th Lancers could receive credit for having the first front ensemble in 1978, because they were the first corps to have multiple stationary percussionists for the entire show. The Crossmen could receive credit in 1980, when they had stationary timpani and a stationary vibraphone. In 1981 two drum corps could be considered for having the first

front ensemble; Cadets having five stationary percussionists, and Spirit of Atlanta who had three.

Chapter 4 1982-2003

DCI incorporated a major change in the summer of 1982, establishing a “pit box” where stationary instruments could be staged in front of the field between the forty-yard lines. The change came so that the stationary instruments wouldn't affect the drill on the field.⁶³ The creation of the “pit box” would establish the front ensemble, which had already begun to develop into an independent section of the drum corps along with the brass, drum line, and color guard.

The development of the front ensemble has largely been driven by experimentation. For almost two decades there was a wide amount of experimentation with instruments, different combinations of instruments, ensemble setups, playing techniques, and compositional techniques. Experimentation continues to be the driving force behind the development of the front ensemble today.

In the 1980s the “orchestral front ensemble” would emerge. In the orchestral front ensemble performers switch instruments between musical selections, playing almost all of the instruments in the front ensemble during the course of a show. This would develop into the “pod-concept,” in which every performer in the front ensemble acts as a multi-percussionist. In the pod-concept one performer can “play everything.”

⁶³ Robert Morrison, “The Development of the Front Percussion Ensemble,” *Percussive Notes* 23, no. 5 (July 1985), 32.

Musicians would have multiple instruments in one station that they perform at for the entire show. The concept of “one person can play everything” would then develop into specialized instrumentalists where “everyone plays one thing.” This will allow performers to play only one instrument for the entire performance, having musicians who specialize on a particular instrument. Instrument specialization is the concept used by many front ensembles today.

In the late 1990s and early 2000s, the front ensemble became somewhat standardized. Most front ensembles at this time used a similar instrumentation, with a similar ensemble setup. There was a significant growth in the technical ability and musicality of the performers in the late 1990s and early 2000s, which is connected to the increasingly complex and demanding musical arrangements.

Establishment of the Front Ensemble

In 1982 many of the drum and bugle corps took advantage of the new rule that established a “pit box.” Half of the drum corps competing in the 1982 DCI Finals had a front ensemble, using stationary timpani, mallet percussion instruments, and various other percussion instruments for the entire performance. At this time, the term used to refer to the front percussion ensemble was the “pit.”⁶⁴ This is because the front ensemble was often compared to the pit orchestra in musical theatre or opera. Table 5 illustrates the

⁶⁴ Ibid.

drum corps who had a front ensemble, using stationary timpani and mallet percussion instruments at DCI Finals in 1982.

Rank	Front Ensemble	No Front Ensemble
1	Blue Devils	
2		Santa Clara Vanguard
3	Garfield Cadets	
4		Phantom Regiment
5		Madison Scouts
6	27th Lancers	
7		Crossmen
8	Bridgemen	
9	Freelancers	
10	Sky Ryders	
11		The Cavaliers
12	Spirit of Atlanta	

Table 5: Front ensemble usage by drum corps competing in the 1982 DCI Finals.

1982 was the last year a drum corps would have a marching mallet percussion section in DCI Finals. There were five drum corps who had marching mallet sections this year. The corps who had marching mallet sections in 1982 were the Cavaliers, Crossmen, Madison Scouts, Phantom Regiment, and the Santa Clara Vanguard. Star of Indiana would later use four marching bell players for their performance of *The Pines of Rome* in 1991.

All but one drum corps competing in the 1982 Finals had stationary timpani. The last drum corps to have a marching timpani line in DCI Finals were the 27th Lancers. They staged the timpani up front on their legs for the first half of the show; after the percussion feature four members picked up the timpani and marched them on the field. Magic of Orlando would later use two marching timpani for the first minute-and-a-half of their show in 1994.

In 1983, the 27th Lancers had a stationary marching timpani line. They had four timpanists who each played one timpani that were stationary in front of the field. They used a stationary marching timpani line because purchasing a set of concert timpani was expensive. With the decision to ground timpani while still using the hand-cranked marching instruments, one performer per drum was used to allow for more tuning changes.

Every drum corps competing in DCI Finals had a front ensemble for the first time in 1983. On average, there were five performers in each front ensemble. Most groups were using the previous instrumentation of the marching mallet section, which consisted of one glockenspiel, one xylophone, one vibraphone, and one marimba. In 1982 the

Garfield Cadets purchased concert mallet instruments, while many other drum corps were placing their marching keyboard instruments on stands due to cost.⁶⁵ Because concert instruments are costly, many drum corps continued to use marching instruments placed on stands as they replaced them with concert instruments during the following years. It would take until 1990 for marching mallet instruments (on stands) to be totally phased out. Table 6 illustrates the average instrumentation for front ensembles competing in DCI Finals from 1982 to 1983.

1982

1 Glockenspiel
1 Xylophone
1 Vibraphone
1 Marimba
1-2 Sets of Timpani
“Percussion”
(1-6 members, 3 on average)

1983

1 Glockenspiel
1-2 Xylophones
1 Vibraphone
1 Marimba
1 Set of Timpani
“Percussion”
(4-9 members, 5-6 on average)

Table 6: The average front ensemble instrumentation of drum corps competing in DCI Finals from 1982 to 1983.

⁶⁵ Robert Morrison, “The Development of the Front Percussion Ensemble,” *Percussive Notes* 23, no. 5 (July 1985), 32.

The establishment of the front ensemble directly influenced a shift in drum corps music. This shift was mainly driven by the fact that arrangers were no longer limited to four mallet players, they were no longer using instruments with limited ranges, they were no longer restricted to instruments that had to be carried, and they no longer had to write for performers who were marching. These developments had an impact on how music for drum corps was arranged. When the front ensemble was officially “established” in 1982, it primarily added color to the music ensemble, or added support by doubling a musical line. The ability to use stationary instruments helped to improve the level of playing, and the difficulty level of the music being written.

While there were significant developments made, these ensembles were nothing like the front ensembles of today. Mallet percussionists in early front ensembles primarily played using two mallets. There was some use of four mallets, however the technical vocabulary and the difficulty level of the music was limited. For the most part, the mallet percussionists in the front ensemble in 1982 and 1983 played similar music, with the same musical role as the marching mallet sections. The front ensemble had taken a step in the right direction by grounding mallet instruments, however that was the only major development for mallet percussion occurring at this time.

The expansion of instruments used was the most significant musical development occurring in the first two years after the establishment of the front ensemble. James Campbell stated that “there is so much variety in colors for melodic lines, musical arrival

points, punctuation, programmatic world music, sound effects - it's limitless."⁶⁶

Percussion instruments that were not commonly used before 1982, were now widely used by many drum and bugle corps. These instruments include: wind chimes, concert bass drums, tam-tams, timbales, bongo, conga, Roto-toms, various types of cymbals, tuned gongs, and many more.

With the use of stationary percussion instruments, the drum line would be phased out of playing hand percussion instruments, or accessory percussion parts on the field. It would also gradually decrease the amount of cymbal playing done by the drum line, such as suspended cymbal rolls, ride patterns, or crashes. These parts instead would be written into the front ensemble. As the front ensemble took over more of the accessory percussion parts, there was a period of transition where drum line members would come up to the front ensemble and play cymbals, or hand held instruments.

Phantom Regiment receives credit for being the first drum corps to use a concert bass drum in 1983. This was one of the first front ensembles to take on the musical role of providing impact to the drum corps musical ensemble. The use of a concert bass drum, or multiple concert bass drums, is a standard part of the instrumentation of every front ensemble today.

Steel pans were used for the first time in drum corps by the Santa Clara Vanguard in 1983. During the percussion feature of the show, every mallet percussionist played a steel pan. The pans were difficult to hear, but provided a color that was unique in drum

⁶⁶ Campbell, Interview with the Author, November 6, 2015.

corps at the time. Since 1983 few other drum corps have experimented with using steel pans, although their use has never become popular.

Front ensembles in 1982 and 1983 were commonly set up with timpani in the middle, mallet instruments on one side, and percussion instruments on the other. The mallet instruments were either set up in a straight line, or with the keyboards angled in towards the timpani. Because mobile percussion “racks” had not yet been widely manufactured, accessory percussion instruments were set up on concert or drum set style stands, or laid on the ground. Cymbals were placed on drum set stands, placed both in the “percussion area” and near the keyboard instruments. Timpani were often surrounded by multiple drums and cymbals. Figure 10 shows a basic layout of an early front ensemble setup.

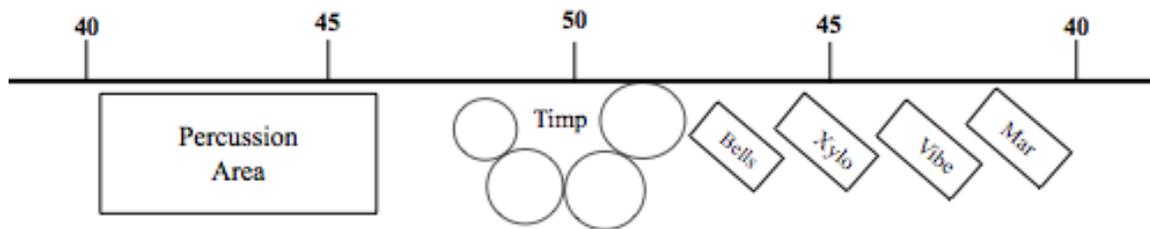


Figure 10: Basic layout of an early front ensemble setup.

The “Orchestral Front Ensemble”

In 1983 the Garfield Cadets stepped forward as the leader of the front ensemble for the time.⁶⁷ The Garfield Cadets had one of the first “orchestral front ensembles.” In many ways these front ensembles functioned similarly to the percussion section in a concert band or orchestra; providing color, effect, support, and occasionally taking the musical lead. The orchestral front ensembles had performers who played a variety of instruments; members switched instruments between musical productions in the show. The orchestral front ensemble was built on the idea that “everyone plays everything.” There are many examples of ensembles like this throughout the 1980s and 1990s. Michael Boo stated that “we thought of the pit as we would think of an orchestra pit for a musical, which is where we got the name. In an orchestra pit, you don’t see the instruments. In a drum corps pit, you do see the instruments, but you’re supposed to pretend that you don’t.”⁶⁸

Over the next fifteen years a wide variety of experimentation with instruments, different combinations of instruments, playing techniques, and arranging techniques took place. Arrangers experimented with using as many instruments as they could, in any combination they could. Groups experimented with a huge variety of setups.

⁶⁷ Robert Morrison, “The Development of the Front Percussion Ensemble,” *Percussive Notes* 23, no. 5 (July 1985), 32.

⁶⁸ Michael Boo, “Pit Stop: A Front Ensemble Premier.” *Fanfare*. DCI.org. April 28, 2004. http://www.dci.org/news/print.cfm?news_id=44ef0078-3ace-4a55-b801-ce976eb04405 (accessed September 10, 2015).

Experimentation would eventually lead to more changes in rules, allowing performers to use the entire length of the front sideline for the first time in 1987.

Like the Garfield Cadets had “found its own identity in ’83, many ensembles achieved their own identity in 1984.”⁶⁹ In 1984 the front ensemble became an entity unto itself.⁷⁰ The Madison Scouts, under the direction of Marc Jacoby, used the front ensemble “pianistically” in 1984, a role that had not yet been achieved.⁷¹ The Blue Devils, under the direction of Katherine Float, used the front ensemble to blend and add color to the corps, or to take the musical lead occasionally. The Blue Devils used tuned gongs during their drum solo, and featured a virtuosic marimba solo played by Dave Brown at the end of *Latin Implosion*.⁷² Morrison gives Mike Mann, Director of Phantom Regiment, the “Junk Yard Award” for the most equipment used in a front ensemble in 1984.⁷³ Phantom Regiment had a large array of sound plates, gongs, and church bells “that were used to bring the *1812 Overture* to a climactic end.”⁷⁴

As the instrumentation of the front ensemble continued to expand during the 1980s, many ensembles would start to include drum set. These were often referred to as “stand up kits” that included several mounted toms and cymbals, and a snare drum.⁷⁵

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ Steve Vickers, *A History of Drum and Bugle Corps*, (Madison, WI: Sights and Sounds Inc., 2002), 95.

Often there was not a complete drum set that included a pedal bass drum and high-hat.⁷⁶ This is largely due to the fact that these components do not project well un-amplified. These instruments can also be difficult to transport. Because of the limited time to setup before performances, front ensembles often restrict themselves to instruments that can roll or be attached to something that rolls.

The Cadets have experimented with using multiple drum set players simultaneously. In 1994 and 1995 the Cadets used seven drum sets, in 2001 they used six. Each drum set included a bass drum, snare drum, rack tom, floor tom, high-hat, and a ride cymbal. These drum sets were played by members of the drum line, who came to the front of the field, took off their drums, and played the drum sets. They were only used for a short portion of the show, taking the role of the main percussion voice during the corps' jazz productions.

The Boston Crusaders used a synthesizer in DCI competition for the first time in 1985, several years before the electronics rule passed.⁷⁷ The corps played the *Beverly Hills Cop* theme song on a synthesizer. Knowing that the use of a synthesizer could lead up to a four-point penalty, Boston waited until the end of the season to use the synthesizer in competition. The corps received a two-point penalty in semi-finals, dropping the corps from 19th place to 20th place.⁷⁸

⁷⁶ Ibid.

⁷⁷ Erin Maher, "The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition," (MA Thesis, University of North Carolina at Chapel Hill, 2011), 21.

⁷⁸ Ibid.

In the late 1980s and early 1990s many drum and bugle corps would begin to phase out marching cymbal lines because of the front ensemble's capability to cover cymbal parts effectively, and more musically. In 1986 Star of Indiana was the first drum corps in DCI Finals that did not have a marching cymbal line. In the following years more drum corps would phase out their marching cymbal lines, often placing the extra membership positions into the front ensemble. In 1987 three drum corps competing in DCI Finals would not have a marching cymbal line. 1993 would be the first year none of the drum corps finishing the competitive season in the top three placements had a marching cymbal line. Today there are only a handful of corps who continue to use marching cymbals. Santa Clara Vanguard, Crossmen, Spirit of Atlanta, and the Colts all continue to use marching cymbal lines.

The instrumentation of the front ensemble gradually expanded throughout the 1980s. Ensembles used an increasing numbers of mallet instruments, and an increasing number of performers. Table 7 illustrates the average instrumentation for front ensembles competing in DCI Finals from 1984 to 1989.

1984

1 Glockenspiel
1-3 Xylophones
1-2 Vibraphones
1-2 Marimbas
1 Set of Timpani
1-2 Percussion Stations
(5-8 members, 6 on average)

1985

1 Glockenspiel
1-2 Xylophones
1-3 Vibraphones
1-2 Marimbas
1 Set of Timpani
1-2 Percussion Stations
(5-8 members, 6-7 on average)

1986

1-3 Glockenspiel
1-2 Xylophones
1-3 Vibraphones
1-2 Marimbas
1 Set of Timpani
1-2 Percussion Stations
(6-10 members, 7 on average)

1987

1-2 Glockenspiel
1-2 Xylophones
1-3 Vibraphones
1-2 Marimbas
1 Set of Timpani
1-2 Percussion Stations
(7-10 members, 7-8 on average)

Continued

Table 7: The average front ensemble instrumentation of drum corps competing in DCI Finals from 1984 to 1989.

Table 7 Continued

1988

1-2 Glockenspiel
1-4 Xylophones
1-3 Vibraphones
1-2 Marimbas
1 Set of Timpani
1-2 Percussion Stations
(6-10 members, 8 on average)

1989

1-2 Glockenspiel
1-2 Xylophones
1-3 Vibraphones
1-2 Marimbas
1 Set of Timpani
1-2 Percussion Stations
(7-12 members, 8 on average)

The front ensemble setups in the 1980's were not consistent between groups. Although the setups were not consistent, many ensembles grouped their instruments into choirs. The keyboard instruments, percussion instruments, and timpani were often segregated into three different sections of the front ensemble setup. Many groups had timpani in the center, percussion on one side, and keyboards on the other side either in a slight arc or in a straight line. There were often cymbals on stands near keyboard instruments and timpani. There was not a wide incorporation of percussion instruments into the keyboard side of the setup.



Figure 11: Members of the Santa Clara Vanguard, 1988. (Photograph used with permission from Drum Corps World, Madison, WI, photographer unknown.)

Although many front ensembles used a similar setup by grouping instruments into choirs, there were several drum corps that explored new ways to setup the front ensemble. In 1985 the Cadets set their keyboards up so that every mallet player could play two instruments at once. In 1987 Phantom Regiment split the front ensemble in half. Each half of the ensemble was centered between the forty and forty-five-yard lines, with almost ten yards of space between each side. This will be referred to as an “antiphonal setup.” Star of Indiana would also use an antiphonal setup in the early 1990s, with ten yards separating each half of the front ensemble. Figure 12 shows an example of an antiphonal style setup. In 1993 Phantom Regiment placed the entire front ensemble on

the field, centered on the side one thirty-five-yard line between the yard line numbers and the front hash. There were several other ways ensembles experimented with their setups, however none of these methods are widely used today.

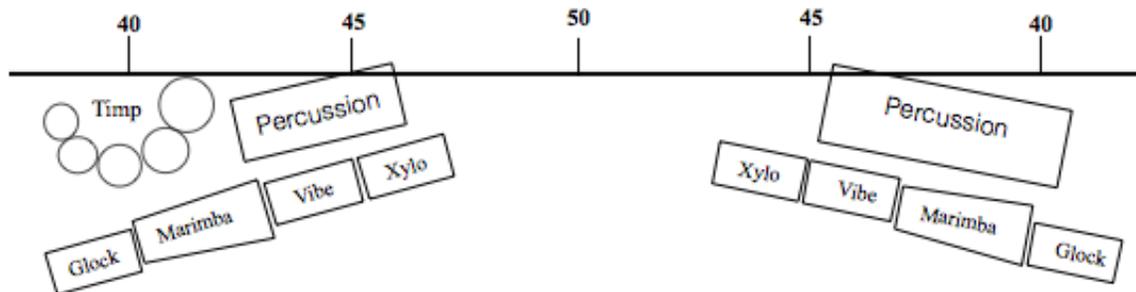


Figure 12: Example of an antiphonal style front ensemble setup.

Drum corps now started to attract quality college music majors to perform in the front ensemble, where previously the keyboard players were snare drummers who didn't make the drum line.⁷⁹ “When full range concert mallet instruments came into common practice, it attracted the collegiate music major who wasn't a rudimental drummer.”⁸⁰ As a result, drum corps began hiring mallet specialists to teach and arrange music for their

⁷⁹ Robert Morrison, “The Development of the Front Percussion Ensemble,” *Percussive Notes* 23, no. 5 (July 1985), 32.

⁸⁰ Campbell, Interview with the Author, November 6, 2015.

front ensembles, as opposed to letting the drum line instructors teach mallet percussionists.⁸¹ At this point the musical quality of the front ensemble began to grow.

Robert Morrison, who was the front ensemble arranger for the Garfield Cadets in the 1980s, made the following statement in an article published in *Percussive Notes*, while discussing the development of the front ensemble in the 1980s:

“The writing of music for the pit ensemble became a craft. No longer were the majority of the mallet charts just a doubling of the horn part. More research of original scores as well as a high level of creativity began to take place. Percussion instructors were now hiring mallet specialists to teach and orchestrate for these ensembles. As a result, many new instructors entered the activity, bringing their varied backgrounds and expertise to the activity.”⁸²

While the experience level of the educators had improved to involve people who specialized in teaching a front ensemble, many of the instructors were not teaching performance techniques that were transferable to a concert style of playing. This was largely due to the fact that a major concern with keyboard percussion instruments in drum corps was the projection of sound. In an effort to project the sound, a “drum corps playing technique” evolved. The primary purpose of this playing technique was to play loud, and to “play as loud as you needed to play, you needed to use arm.”⁸³ Jeff Prosperie stated that “it is true that before the introduction of amplification to the marching idiom the front line percussionist was often labeled heavy-handed and lacking in nuance and

⁸¹ Chris Koenig, “Growth of the Modern Front Ensemble Through the Expanded Use of Electronics from 2000-2013,” (Morehead State University, 2014), 6.

⁸² Robert Morrison, “The Development of the Front Percussion Ensemble,” *Percussive Notes* 23, no. 5 (July 1985), 32.

⁸³ Kilgore, Interview with the Author, December 15, 2015.

range of color/timbre on the instrument. Often these players used maximum heights for outdoor projection.”⁸⁴

Despite Morrison’s statement about drum corps attracting quality music majors, this was not necessarily true on a wide scale. While there were developments in the front ensemble that began to attract music majors, the style of playing and technical approach was not one that transferred to a classical or solo percussion setting. Erik Johnson, long time arranger for the Cavaliers, stated he did not march his last two summers of drum corps (’86 and ’87) because he wanted to focus on playing marimba. The following is an excerpt of an interview with Mr. Johnson. He was discussing his reasoning behind not marching drum corps, explaining that it was a different scenario back then.

“It just wasn't developed enough at the time. I mean we had a guy at the Cavaliers, his name was Thomas Elliot, he was a really great marimba player from Louisiana. He did play a lot of very elaborate parts, but there was only one marimba spot. My reasoning was because I was very into solo marimba. I was really into solo marimba, and the approach that Leigh (Howard Stevens) had to the instrument. I really wanted to focus on that. I didn't feel like marching drum corps was going to give me the experience that I personally was looking for. So you know, if I was going to spend all summer playing marimba I was going to do it from behind the instrument in a practice room and not on the drum corps field. Again, it was not even in the same place then as it is now, at all.”⁸⁵

Matthew Ryan Kilgore, who is currently the ensemble music coordinator and front ensemble instructor at the Bluecoats, had similar things to say about choosing to not march drum corps in the early 2000s. Mr. Kilgore stated that:

⁸⁴ Jeff Prosperie, “Marching Percussion: Springboard to the Percussion World or a One-Dimensional Dead End? The Transfer Value of Marching Percussion.” *Percussive Notes* 43, no. 5 (October 2005), 35.

⁸⁵ Johnson, Interview with the Author, December 9, 2015.

“She-e Wu, who became my private teacher through my undergraduate degree, told me that I should stop marching drum corps... She said that it was bad for my technique and my musicianship, and that I didn't need to do it anymore.”⁸⁶

Because of the growing quality and variety of percussion instruments, an increase in the ability level of the performers, and higher quality instruction, the writing for front ensembles started to become a craft. Writers were now able to use the front ensemble as its own voice and texture, instead of an accompaniment to the brass. Music arrangers began to think of the percussion section differently. With more instruments used, and a larger variety of instruments being used, composers began to create contrapuntal textures. They were now able to create a rhythmic and textural line, as well as a melodic line. With the ability to use a wide variety of instruments, composers had the opportunity to provide more colors, and create more effects. The front ensemble was now also capable of providing impact with the incorporation of concert bass drums, tam-tams, and other loud instruments.

With performers playing stationary mallet instruments, composers were able to write parts that were more natural. At this time the music for mallet instruments was primarily written to be played using two mallets.⁸⁷ The use of four mallet techniques started to become more common, however the technical vocabulary of mallet players would be limited for several years. When performers were using four mallets, they were mainly playing double vertical strokes. Other four mallet vocabulary included rolls, alternating strokes, or the limited use of single alternating strokes.

⁸⁶ Kilgore, Interview with the Author, December 15, 2015.

⁸⁷ Johnson, Interview with the Author, December 9, 2015.

The orchestral front ensemble functioned as a color section. It was a color section that would occasionally be the melodic leader as well, but just occasionally.⁸⁸ In the music ensemble of the drum corps, keyboard instruments would often play the role of string instruments or woodwind instruments. Mallet players played runs and ostinato patterns, but they were often playing transcriptions from other instruments.

Sound effects like thunder sheets, wind machines, ocean drums, rain sticks, marching machines, trashcan lids, and countless others were now commonplace in drum corps. Brake drums, propane tanks, steel pipes, and anvils also become popular ways to add metallic color to a rhythmic line. Depending on what the program calls for, there are ample opportunities to create effects using a wide variety of sounds. Drum corps have experimented with using extensive numbers of effect instruments, all in an effort to create a texture or sound that adds effect to the overall show.

The complexity of the music written continued to develop, and the technical demands that arrangers placed on performers continued to increase. As the late 1990s approached, more music was being written for skilled mallet percussionists. For the first time, pitched percussion instruments were capable of effectively adding a melodic voice or counterpoint to the music ensemble.

The orchestral front ensemble would continue to be used by drum corps into the 1990s and 2000s. Star of Indiana, under the direction of Thom Hannum, would continue to have an orchestral front ensembles until they stopped competing in DCI in 1993. As

⁸⁸ Ibid.

previously stated, the defining characteristic of these front ensembles was the concept that “everyone played everything,” functioning similar to percussion sections in orchestras or concert bands. Performers in the orchestral front ensemble switched instruments between musical numbers, playing a wide variety of percussion instruments.

Pod-Percussion

In 1990 the Cavaliers and Phantom Regiment started to develop what will be referred to as the “pod concept.” Led by Brian Mason, this concept was centered around the idea of each percussionist having a multiple-percussion setup in individual percussion pods.⁸⁹ Instead of having performers who played either percussion instruments or mallet percussion instruments and then switched instruments between songs, pod-percussion front ensembles had performers who were multi-percussionists.⁹⁰ A keyboard player wouldn't have a marimba or vibraphone by itself, with all of the other percussion instruments on the other side of the pit. Instead they condensed all of the instruments that a performer needed for an entire show into one compact setup. For example, one performer could have a marimba with a set of mounted box bells, a suspended cymbal, woodblocks, chime notes, and various drums.

Orchestral front ensembles were based on the concept that “everyone would play everything,” the pod-percussion front ensemble took that philosophy and changed it to

⁸⁹ Chris Koenig, “Growth of the Modern Front Ensemble Through the Expanded Use of Electronics from 2000-2013,” (Morehead State University, 2014), 13.

⁹⁰ Johnson, Interview with the Author, December 8, 2015.

“one person can play everything.” The concept of having a multi-percussionist in the front ensemble continues, and has evolved into several different methods of performance and arranging today.

The pod-percussion front ensemble evolved to prevent musicians from switching instruments, or moving to a different part of the pit during performance. Previously, performers dropped their mallets and ran across the ensemble to play a different instrument. Now performers remained at one station for the entire show, which to some has a more professional look.⁹¹ The pod-concept continued at the Cavaliers through the 1990s, into the first couple of years that Erik Johnson started arranging for the Cavaliers front ensemble in 1997. Other groups like Phantom Regiment, Santa Clara Vanguard, and the Cadets continued to use the pod concept for years.

The music industry began making instruments and equipment that were designed to be used outdoors in the front ensemble. The limited setup time before performances has always been a challenge to arrangers, who had to figure out what instruments they wanted to use and how those instruments were going to be transported. Manufacturers would develop mobile percussion racks in the 1980s and early 1990s. These racks would allow multiple instruments and accessories to be mounted inside of a mobile frame. Yamaha introduced a synthetic bar marimba on a “field frame” in the late 1980s. This instrument was designed to withstand the rigors of being transported outside on rough

⁹¹ Ibid.

terrain, and to handle the natural elements of heat and humidity that typically damage musical instruments quickly.

Instruments on a “field frame” feature an accessory bar that runs parallel to the instrument, one the far side of the upper manual. This was a significant development because things could be attached to the frame of a keyboard instrument without touching the ground. The introduction of the “pod-percussion” concept and the development of the field frame led to groups mounting percussion instruments like cymbals, drums, glockenspiels, xylophones, and many others, on their keyboard instruments. Mounting smaller instruments to larger mallet instruments or mobile percussion racks continues on a wide scale. Almost every mallet instrument in every front ensemble today has at least one cymbal, or accessory instrument, mounted onto its frame.

Other instrument manufacturers would start to produce similar instruments around the same time. Today multiple instrument manufacturers produce concert percussion instruments that are built on a “field frame.” The music industry continues to develop mallets, instruments, and equipment specifically designed to be used in drum and bugle corps front ensemble. Figure 13 displays an example of a marimba built on a field frame.



Figure 13: Marimba on “field frame” used by Rhythm X. (Photograph taken by the Author)

In addition to the playing technique, various experiments were done in an effort to project the sound of keyboard instruments. One example of these experiments was in 1997, when the Cavaliers built “marimba projectors.” They devised a system where a piece of plastic came down from the back of the marimba and scooped through the front. The projectors were ultimately considered a failure because of the complications of taking the projectors off, and putting them back on multiple times a day. The Cavaliers replaced the projector system by placing big pieces of plexiglass on the ground

underneath the marimbas. They were trying to give the marimbas a more resonant surface for the sound to bounce off of.⁹² A couple of other front ensembles, including the Crossmen, would experiment with placing plexiglass under keyboard instruments. Other experiments conducted to help project the keyboard sound include angling the instruments forward by placing the wheels on the player's side of the instrument up on blocks, so that the resonators were exposed to the audience. All of these experiments were done in an effort to give the front ensemble more contribution to the overall musical package.⁹³

The pod-concept had a minimal effect on the standard way front ensembles were setting up, because there was still wide experimentation occurring with different ensemble setups. The use of the pod-concept did however eliminate the clump of percussion instruments that consumed a large amount of the setup space. Ensembles were still setting up their mallet instruments either in straight lines, or in arcs. Instruments were mixed together, or they were voiced into choirs. When the Cavaliers started using percussion pods, they set up with a large amount of space between each pod. Setting up with a large amount of space between instruments has not been done on a wide scale. The pod-concept did, however, establish "stations" that performers would stay at for the entire show.

⁹² Johnson, Interview with the Author, December 9, 2015.

⁹³ Ibid.

Specialized Performers

After working with the pod-concept for a few years, Erik Johnson decided that he wanted the performers to focus more on their keyboard parts.⁹⁴ Other arrangers and instructors came to similar conclusions around the same time. Erik did not want performers “playing a little bit of marimba, then playing some wood blocks, then the cymbal, then some brake drum.”⁹⁵ Scott Koter encouraged Erik to have a “rack percussionist” to cover all of the percussion parts.

Mallet percussionists in the front ensemble could now play their instrument through entire musical phrases, instead of having to be pulled off a mallet part to cover a concert bass drum impact, a suspended cymbal roll, or some other percussion part. The mallet players could now play their keyboards “as much as possible, letting all of the colors come from the rack percussion.”⁹⁶ With the use of rack percussionists, arrangers were able to develop more complicated and challenging mallet parts. Erik Johnson stated that:

“I wanted the front ensemble to have the technical demand that was expected from all the other instruments on the field. I was really pushing the front ensemble in winter drum line because there was this emphasis on the battery sections to have all of this exposure, and to play all of these licks. The only expectation of the front ensemble was the play fast sixteenth notes. And I’m like: ‘well that’s not difficult!’ You know, anybody could do that.

That’s when I really wanted front ensembles to start playing much more technically. I wanted the expectation to be there, looking for the virtuosity in the front ensemble in indoor. I had the same approach to outdoor, but indoor you are

⁹⁴ Johnson, Interview with Author, December 9, 2015.

⁹⁵ Ibid.

⁹⁶ Ibid.

able to write more virtuosically because there is not a horn line. With regard to drum corps you can only take it so far because of the horn line. Otherwise it is just wasted effort.”⁹⁷

The growth in the playing ability of keyboards players and the progression of writing becoming more virtuosic and technically demanding, can be directly tied to the developments occurring within the percussion community as a whole.⁹⁸ Erik Johnson had the following to say about the growth in the ability level of performers, and the impact that it had on arranging:

“I think a lot of it has to do with stronger players coming out of the universities. Stronger players who are percussion majors are going to these drum corps. Better players in the drum corps offers the arrangers more possibilities musically. I know that’s the way I felt. I always used to tell people that I have the best players who can play anything, so I can write anything I want to. That wasn’t always the case in drum corps.”⁹⁹

The technical ability of the performers and the complexity of the music being arranged grew throughout the 1980s and 1990s. However, in the early 2000s the performance level of front ensemble members began to grow at a much more rapid rate. Iain Moyer, who is currently the front ensemble arranger and supervisor for the Cadets, referred to the early 2000s as the “four-mallet revolution.”¹⁰⁰ At this time educators started to incorporate concepts that were commonly taught in universities and music conservatories.

⁹⁷ Johnson, Interview with the Author, December 9, 2015.

⁹⁸ Kilgore, Interview with the Author, December 15, 2015.

⁹⁹ Johnson, Interview with the Author, December 9, 2015.

¹⁰⁰ Timothy Heath, “A Look Behind: A Conversation with Iain Moyer, Front Ensemble Arranger and Supervisor for the Cadets.” *Percussive Notes* 52, no. 3 (May 2014), 6.

In the late 1990s and early 2000s the front ensemble became somewhat standardized. “If you look at what was going on in the late ‘90s there was a serious transition going on, people figuring things out.”¹⁰¹ The instrumentation of the front ensemble continued to expand, typically including three or four marimbas, three or four vibraphones, one xylophone, one glockenspiel, one timpanist, and often multiple “auxiliary” percussionists or a drum set player. Seth Adams wrote front ensemble music that used two full sets of timpani at Carolina Crown in the early 2000s. Magic of Orlando and Glassmen also experimented with using multiple sets of timpani.

In 1998, the Cavaliers were the first front ensemble to use four marimbas and four vibraphones. This would soon become the standard instrumentation for the majority of modern front ensembles. The Colts would be the second group to use this combination of instruments the following year. Table 8 illustrates the average front ensemble instrumentation for drum corps competing in DCI Finals from 1990 to 2003.

¹⁰¹ Johnson, Interview with the Author, December 9, 2015.

1990

1-2 Glockenspiel
1-2 Xylophones
1-3 Vibraphones
1-5 Marimbas
1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(6-11 members, 8 on average)

1991

1-2 Glockenspiel
1-2 Xylophones
1-3 Vibraphones
1-3 Marimbas
1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(7-11 members, 8-9 on average)

1992

1-2 Glockenspiel
1-2 Xylophones
1-3 Vibraphones
1-3 Marimbas
1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(7-12 members, 10 on average)

1993

1-4 Glockenspiel
1-2 Xylophones
2-3 Vibraphones
1-4 Marimbas
1-2 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(7-14 members, 9-10 on average)

Continued

Table 8: The average front ensemble instrumentation of drum corps competing in DCI Finals from 1990 to 2003.

Table 8 Continued

1994

1-2 Glockenspiel
1-2 Xylophones
2-4 Vibraphones
1-3 Marimbas
0-1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(8-14 members, 10 on average)

1995

1 Glockenspiel
1-2 Xylophones
1-3 Vibraphones
1-3 Marimbas
0-1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(8-12 members, 9 on average)

1996

1-3 Glockenspiel
1-2 Xylophones
2-3 Vibraphones
2-3 Marimbas
1-2 Sets of Timpani
0-2 Percussion Stations
0-1 Drum Set
(8-14 members, 10 on average)

1997

1-2 Glockenspiel
1-2 Xylophones
2-3 Vibraphones
2-4 Marimbas
1-2 Sets of Timpani
0-2 Percussion Stations
0-1 Drum Set
(8-11 members, 9 on average)

Continued

Table 8 Continued

1998

1-2 Glockenspiel
1-2 Xylophones
2-4 Vibraphones
2-4 Marimbas
1-2 Sets of Timpani
0-2 Percussion Stations
0-1 Drum Set
(8-13 members, 10 on average)

1999

1-2 Glockenspiel
1-2 Xylophones
3-4 Vibraphones
3-4 Marimbas
1-2 Sets of Timpani
0-2 Percussion Stations
(8-15 members, 10-11 on average)

2000

1-2 Glockenspiel
1-2 Xylophones
2-4 Vibraphones
2-4 Marimbas
1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(8-12 members, 10 on average)

2001

1 Glockenspiel
1-2 Xylophones
2-4 Vibraphones
3-4 Marimbas
1-2 Sets of Timpani
0-2 Percussion Stations
0-1 Drum Set
(9-12 members, 10 on average)

Continued

Table 8 Continued

2002

1 Glockenspiel
1 Xylophone
3-4 Vibraphones
3-4 Marimbas
1-3 Sets of Timpani
0-2 Percussion Stations
0-1 Drum Set
(8-15 members, 10 on average)

2003

1-3 Glockenspiel
1 Xylophone
2-4 Vibraphones
3-4 Marimbas
1-3 Sets of Timpani
0-2 Percussion Stations
0-1 Drum Set
(9-14 members, 10-11 on average)

While there continues to be variations in the setup of the front ensemble, a standard setup began to emerge in the early 2000s. In 2000, the Cavaliers used a setup for the first time that many ensembles would adopt, and modify. The “standard Cavaliers setup” had all four marimbas front and center, with two vibraphones on the outside of the marimbas in the front row, one on each side. The other two vibraphones were behind, and slightly outside of the vibraphones on the front row. The setup was symmetrical, with the timpani on the outside of the mallet instruments.

“With marimbas grouped together, you could achieve a full marimba choir sound. Vibraphones are different because of the sustain. They can be on either end of the ensemble and really work together antiphonally because of the sustain.”¹⁰² While some groups continued to use integrated arcs, and others voiced instruments into choirs; the setup pioneered by Erik Johnson at the Cavaliers became the standard setup used and modified by groups throughout the 2000s. Modified versions of this setup continue to be used on a wide scale today. Figure 14 shows the standard Cavaliers setup.

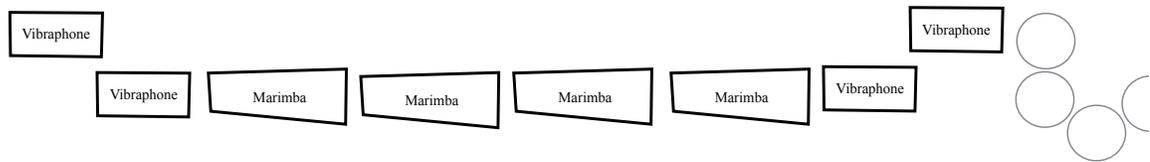


Figure 14: The “Standard Cavaliers Setup.”

In 2000 DCI would again change the rules regarding instrumentation, allowing the use of brass instruments in any key. Previously corps were restricted to G bugles. This rule had been in the proposal process for several years before it passed. Jeff Fiedler,

¹⁰² Johnson, Interview with the Author, December 9, 2015.

former CEO of the Santa Clara Vanguard and former longtime director of the Cavaliers, considers the any-key brass rule to be “the most profound change in DCI’s history.”¹⁰³

The any key rule affected the front ensemble by opening up new opportunities for the entire music ensemble. Music could now be arranged in any key, which may have expanded the styles of music being performed. In the early 2000s musicality became a larger priority for drum and bugle corps. The changes occurring in brass instruments over the years have been referred to as “changes that constantly pursued greater musicality through the evolution of a ‘novelty noise maker’ into a legitimate musical instrument.”¹⁰⁴

¹⁰³ Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 17.

¹⁰⁴ Steve Vickers, *A History of Drum and Bugle Corps*, (Madison, Wi: Sights and Sounds Inc., 2002), 178.

Chapter 5
“The Age of Amplification”
2004-2008

The next major evolution of the DCI front ensemble would occur in 2004, when electronics were allowed to be used in competition. The new DCI rule officially stated that “The instruments known as the ‘front percussion,’ or ‘pit,’ can be amplified with the use of microphones, speakers, mixer boards, and all necessary electronic equipment. The amplification of the human voice is also allowed.”¹⁰⁵ Although electronic instruments would not be allowed until 2009, the ability to amplify acoustic instruments and the human voice in 2004 would have a substantial impact on the drum and bugle corps activity.

The incorporation of amplification impacted the front ensemble in multiple ways. Primarily, it allowed the front ensemble to be balanced as an equal voice to the brass line and drum line, creating new opportunities for composers and arrangers regarding orchestration. Today it is standard for each marimba, vibraphone, and timpani in the front ensemble to be amplified with the use of microphones. Accessory percussion instruments and sound effects are also commonly amplified. In many cases amplification led to a change in the playing techniques commonly used in front ensembles.

¹⁰⁵ Dennis E. Cole, “What is a Drum and Bugle Corps? Reinterpreting Traditions Inside the Musical Community,” (Ph.D. diss, Kent State University, 2009), 107.

Along with the experience and maturity level of performers continuing to rise, amplification helped make front ensemble performance more virtuosic. Ultimately, amplification made it possible for the front ensemble to contribute musically on an equal level to the drum line or the brass line.¹⁰⁶

Getting the Electronics Rule Passed

George Hopkins, Director of the Cadets, submitted the first proposal for amplification and electronic instruments to DCI in 1989. He tried to get his proposal passed year after year, but never made it to the final step, a vote by the Board of Directors.¹⁰⁷ It was not until amplification and electronic instruments were separated into two different rule proposals that either received enough support to pass the DCI Rules Congress, and make it to a vote by the Board of Directors.¹⁰⁸ In the winter of 2003 the amplification proposal was passed by the DCI board of directors in a 12-8 vote.¹⁰⁹

Amplification and electronic instruments were used by marching bands and indoor percussion ensembles for years before they were incorporated by DCI. The use of electronics in the other areas of the marching arts had some influence on DCI incorporating amplification. Because it is outside of the scope of this document, no

¹⁰⁶ Timothy Heath, "A Look Behind: A Conversation with Iain Moyer, Front Ensemble Arranger and Supervisor for the Cadets." *Percussive Notes* 52, no. 3 (May 2014), 6.

¹⁰⁷ Erin Maher, "The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition," (MA Thesis, University of North Carolina at Chapel Hill, 2011), 28.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid, 37.

research was done into determining when electronics were first used by front ensembles in marching bands or indoor percussion ensembles.

Front Ensemble Amplification

At the 2004 DCI Finals there were only three drum corps who did not use amplification. The front ensembles that did not use amplification were the Bluecoats, Glassmen, and Phantom Regiment. Table 9 illustrates the widespread incorporation of amplification the first year it was allowed by DCI.

Rank	Used Amplification	Did not use Amplification
1	The Cavaliers	
2	Blue Devils	
3	Santa Clara Vanguard	
4	The Cadets	
5		Phantom Regiment
6		Bluecoats
7	Carolina Crown	
8	Madison Scouts	

Continued

Table 9: The use of amplification by drum corps competing in the 2004 Drum Corps International Division I Finals.

Table 9 Continued

Rank	Used Amplification	Did not use Amplification
9	Boston Crusaders	
10	Blue Knights	
11	Crossmen	
12		Glassmen

The following year (2005) every drum corps competing in DCI Finals used amplification. Although some individuals in the drum corps community were opposed to amplification when the rule passed, many recognized that amplification was a necessity for groups that wanted to remain competitive. Since 2005, every drum corps competing in DCI Division I/World Class Finals have used amplification in their front ensemble.

Mallet Percussion Amplification

The ability to mic, and amplify mallet percussion instruments created new possibilities for the front ensemble. Amplification increased the pitch range of mallet instruments that could be used, and provided mallet players more color options with the capability to use a wider variety of mallets. The playing techniques used in many ensembles also changed, which expanded what is technically possible for mallet percussionists, leading to arrangers that would begin writing music that was more

virtuosic. Amplification gave mallet percussion instruments a more prominent voice in the drum corps music ensemble.

A result of amplification was an increased note range that could be used on mallet percussion instruments. This is because a main concern while arranging keyboard parts is no longer the projection of sound. For example, more music can be written for the low register of the marimba. Without amplification you have to overplay the instrument in order to project the sound, which in the low register of a marimba will produce a poor sound and could potentially damage the instrument. With amplification the low register of the marimba can be played appropriately and musically with a lighter touch, because microphones are used to balance the volume to the rest of the ensemble.

Amplification led to more groups using extended range instruments, with nine ensembles using either 4.5 or 4.6 octave extended range marimbas in 2004. In 2005 ten ensembles would use extended range marimbas. By 2007 every drum corps competing in DCI Finals used extended range marimbas.

Some drum corps have experimented with using five-octave marimbas. In 2007 both Santa Clara Vanguard and the Blue Knights used two five-octave marimbas, and two 4.6-octave marimbas. Santa Clara Vanguard later experimented with using four five-octave marimbas. The five-octave marimba has never become standard because of the delicate range of the lowest octave, the increased cost of the instrument, and the logistical issues that come with traveling around the country with such a large instrument. Use of the four octave vibraphone has been on a limited basis, mainly restricted to groups that

are sponsored by Yamaha. The Cadets, Cavaliers, Bluecoats, and Carolina Crown continue to use four octave vibraphones.

Using amplification to increase the volume output of a marimba or vibraphone allowed mallet players to use a wider variety of mallets, giving arrangers a much larger color pallet. Before amplification, sound projection was a major concern while making mallet selections. This often meant that hard, heavy mallets were used because they were loud, however they produced a very articulate and bright sound. Darker and warmer sounds were now available because microphones did the work of projecting the volume enough to balance the mallet percussion voice with the rest of the music ensemble. With amplification, softer and lighter mallets began to be used on a wide scale.

Amplifying the front ensemble expanded the scope of what is technically possible. This because instruments no longer had to be played at extreme volumes with high velocity and a heavy touch in order to be heard. Similar to what would be done in a concert setting, performers played with a lighter touch while using various mallets to manipulate articulation.¹¹⁰ Playing with a lighter touch not only achieved a better sound, but allowed performers to play with better technique which raised the difficulty level of the music that could be executed. Amplification also expanded the dynamic range of music that could be performed.

The expanded technical vocabulary of performers allowed arrangers to write music that was increasingly complex and demanding. Arrangers were now writing mature

¹¹⁰ Kilgore, Interview with the Author, December 15, 2015.

music that resembled literature from the solo marimba, vibraphone, and percussion ensemble repertoire. Jeff Prosperie made an observation while judging a DCI show, stating that drum corps were now “utilizing amplification and advanced keyboard techniques throughout the dynamic spectrum with a plethora of multi-timbre mallets. These ensembles represented some of the finest ensemble playing I have heard regardless of genre or professional/student status.”¹¹¹

With the use of amplification, many drum corps would change the playing approach for mallet instruments to be more similar to a concert approach. This change came because performers were no longer working to produce a loud keyboard sound acoustically. Four-mallet techniques that were once considered too advanced for drum corps, double-lateral rolls and one-handed rolls for example, were now standard vocabulary in front ensemble music.¹¹² In an interview with Matthew Kilgore, I asked him what was different about the playing approach when he started teaching at Bluecoats, from when he marched drum corps in 1998 and 1999. His response was:

“When I marched in ’99, I had never heard of shifting. I never heard anything about shifting while I was there. There were no Method of Movement concepts that I remember from ’98 or ’99 being applied. In 2008 it was almost straight from the textbook. Everything that I had learned through my undergraduate program, and going to the Stevens’ Seminar, all of those ideals that I had learned in terms of technique and movement were now common place in terms of teaching Bluecoats in 2008.”¹¹³

¹¹¹ Jeff Prosperie, “Marching Percussion: Springboard to the Percussion World or a One-Dimensional Dead End? The Transfer Value of Marching Percussion.” *Percussive Notes* 43, no. 5 (October 2005), 35.

¹¹² Timothy Heath, “A Look Behind: A Conversation with Iain Moyer, Front Ensemble Arranger and Supervisor for the Cadets.” *Percussive Notes* 52, no. 3 (May 2014), 6.

¹¹³ Kilgore, Interview with the Author, December 15, 2015.

Not all front ensembles changed their approach to keyboard instruments because amplification was now allowed. When Erik Johnson was asked if he changed the approach at the Cavaliers when amplification was introduced he very confidently stated that “it did not change at all.”¹¹⁴ Erik went on to say:

“We really took pride in the fact that we could have that sound, and not be amplified. So when amplification came about, we really didn't need it because we worked so hard to produce this sound without it. So we just used it for slight enhancement.”¹¹⁵

Whether or not the playing approach that the Cavaliers (or others) use changed, the playing ability and technical proficiency of the performers had certainly grown. The changes that had occurred, and are still occurring in the playing techniques used in the front ensemble did not change over night. They are techniques that evolved in universities or were pioneered by professionals, that have gradually found their way into the front ensemble. Dennis DeLucia, long time DCI percussion instructor and arranger, stated that amplification “allows legitimate percussion instruments such as vibes, marimbas, timpani, ect. to be played legitimately, and students will not return to school in the fall playing like unmusical monsters.”¹¹⁶

Ultimately, amplification allowed the mallet percussion voice to have a prominent role in the music ensemble. With the capability to balance the keyboards to the brass, or to the drum line, mallet instruments can function in multiple ways. In loud musical

¹¹⁴ Johnson, Interview with the Author, December 9, 2015.

¹¹⁵ Ibid.

¹¹⁶ Harry Heidelmark, “Part 2: An Interview with Percussion Arrange Dennis DeLucia,” *Drum Corps World* 36, no. 3 (June 2007), <http://www.drumcorpsworld.com/?p=1344> (accessed January 7, 2016).

moments before amplification, front ensembles could only play loud non-pitched instruments like cymbals or concert bass drum. If the arranger had written a marimba or vibraphone part, it would not have been heard over the drum line or brass. Now arrangers could give keyboard instruments a more prominent role, regardless of the dynamic or density of the music on the field.



Figure 15: 2009 Bluecoats front ensemble. (Photograph by John Lowe, used with permission of the photographer.)

Percussion Amplification

Amplification provided new opportunities for percussion instruments in the front ensemble. It allowed percussion instruments like hand drums, drum set, small concert instruments, timpani, and various other instruments that are not loud enough to be heard over a drum and bugle corps to be played authentically, without the burden of producing enough volume to be heard in a stadium determining how the instruments would be played. Front ensembles were using instruments and creating sounds that had never been heard in a football stadium. Amplification gave more percussion instruments in the front ensemble the opportunity to be played musically with proper techniques. Percussionists in the front ensemble now had a prominent voice in the drum corps, allowing more percussion instruments to be featured instead of exclusively serving as color instruments.

As stated previously, a concern with instruments in front ensemble prior to amplification was producing enough sound to be heard. This often led to instruments that are most commonly played with hands, being played with sticks or hard felt mallets. With the ability to mic hand drums like bongo and conga, it was now possible to play these instruments using traditional techniques to achieve authentic and musical sounds. Various styles of music, Latin music for example, could be played more stylistically “correct.” An example of this can be seen in 2005, when the Bluecoats programmed a Latin percussion feature in their show *Caravan*.

Amplification allowed small percussion instruments and sound effects that do not produce much volume to be played appropriately, and still be heard. Instruments and sound effects like udu, castanets, shakers, tambourines, ocean drums, bird calls, marching

machines, and countless others are commonly amplified. The ability to mic any percussion instrument or sound effect expanded the sonic and musical capabilities of the front ensemble, and the drum corps as a whole.

The front ensemble was now capable of supporting extended moments of a drum corps show, with sounds and textures from other styles of music that up to this point were foreign to drum corps. In 2004 the Cavaliers amplified finger snaps at the beginning of their *James Bond* production. The Madison Scouts used micd castanets extensively in their 2005 production of *Carmen*. There are numerous other examples of front ensembles that used microphones to amplify quiet sounds, and used them as a primary voice in the orchestration.

Micing the drum set would also have an impact on how it was used in a front ensemble. Primarily, it allowed the drum set to be played as it traditionally would be in most any other musical context. Prior to amplification, drum set parts were commonly covered by a “rack” player, who would stand and play a modified drum set within the mobile percussion rack. This was often without high-hats and bass drum, because these instruments are difficult to hear in a football stadium without the aid of microphones. Amplification led to more groups having a drum set player who sat down, and played the instrument as it would be done in any other musical setting.

Amplifying the drum set gave it the capability to be balanced as an equal in the musical ensemble. Prior to amplification the drum set, like many other percussion instruments, was a color instrument. Now the drum set can be balanced to the other instruments, and play a major role in the music like it would in many other contexts, such

as a rock band, jazz combo, or pit orchestra. This led to the drum set having a prominent role in many front ensembles, and led to more front ensembles using a drum set.

Amplifying timpani also became standard for most front ensembles. This gave the timpani a more prominent voice in the ensemble and allowed it to be occasionally used as a featured instrument. Similar to developments discussed with mallet percussionists, amplification would allow timpani players to use a concert style of playing approach. Amplification would also allow a wider variety of mallets to be used, because projection of the sound was no longer a major factor.

Voice Amplification

In addition to front ensemble instruments, the human voice was allowed to be amplified beginning in the summer of 2004. Vocals have been used in drum corps shows in a wide variety of ways. Singing and narration are the most common ways that voice has been used in show design. The ability to use voice in a drum corps show would allow designers to communicate concepts and ideas in a more direct and literal way.¹¹⁷

The addition of microphones allowed drum corps to perform music that included singing. Carolina Crown was the first drum corps to amplify singing in 2004, having four performers sing *Seasons of Love* from the musical *Rent*. Although Carolina Crown was the first drum corps to amplify singing, there are examples of drum corps who sang in

¹¹⁷ Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 31.

their shows before amplification. Prior to 2004, multiple performers would have to sing together to be heard in a football stadium. The Garfield Cadets received a one point penalty in 1977 for ending a production number from *Jesus Christ Superstar* with the entire drum corps singing “Amen.”¹¹⁸ They received the penalty because vocalization of any kind was illegal in DCI at the time.

Many drum corps productions now feature narration. The first group to use narration was the Boston Crusaders in 2004, who narrated their show *The Composition of Color*. The impact that narration has had on the drum corps community is significant, because the ability to speak to the audience has greatly impacted show design. It allows drum corps shows to include text, which created new ways of presenting a show and communicating an idea or story. The use of text can make the intended concept of the show more clear to audience members.¹¹⁹

In 2007 the Cadets used narration to an extent that had not yet been done. The show titled *This I Believe* used a narrator to “introduce sections of the drum corps, depict a typical rehearsal, and repeatedly extol the values of teamwork and community.”¹²⁰ This show was a pioneer for groups in the future who would build their show around narration.

¹¹⁸ Rosalie Sward, "How Musical and Visual Design has Evolved," in Steve Vickers, ed., *A History of Drum and Bugle Corps*, vol. 1 (Madison: Sights and Sounds, Inc., 2002), 128.

¹¹⁹ Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 51.

¹²⁰ *Ibid*, 56.

Sound Engineer

When amplification was first passed, it was stipulated that the soundboard be operated by a performing member of the drum corps during the show.¹²¹ With a member of the front ensemble running the sound board during performances, making adjustments during a show would be very difficult. In 2007 a rule was passed that no longer required the sound board to be operated by a performing member of the drum corps, but would instead allow it to be run by a staff member. Now that the soundboard can be operated by a staff member, there can be a better balance of electronic and acoustic sounds from venue to venue.

Initially, the staff who taught the front ensemble was responsible for setting up the sound equipment, dialing in the settings, and balancing the volume. Many drum corps today have hired a sound engineer that travels with the corps. Touring with a sound engineer lets the teaching staff teach, while the responsibility of running sound falls on the sound engineer. Drum and bugle corps have continued to invest in higher quality equipment, and more experienced professionals. Drum and bugle corps had now evolved into what is essentially a high-budget professional quality touring production.

Today it is common to see sound engineers sitting in the stands, or standing next to the press-box with an iPad (or another brand of tablet computer) mixing sound while connected to the sound board wirelessly. Iain Moyer, arranger for the Cadets front ensemble, stated that:

¹²¹ Ibid, 45.

“You wouldn’t think that there would be as drastic a shift from performance venue to performance venue, but when you account for a domed stadium vs. an open-air stadium, a fully enclosed outdoor stadium vs. an open-ended outdoor stadium, metal bleachers or concrete seating areas, and stadium-specific audio characteristics, there is really a lot to adjust on a night-to-night basis.”¹²²

Instrumentation

The instrumentation of the front ensemble continued to expand, both in the number of instruments used and the variety of instruments used. With the ability to amplify, more delicate instruments have been used on an expanded scale. A few examples of delicate instruments that have been used in front ensembles since the introduction of amplification include: steel pans (Bluecoats 2006), Waterphone (Cavaliers 2006), and hammer dulcimer (Cavaliers 2008). In addition to new instruments being used, the average number of mallet percussion instruments in each front ensemble continued to increase.

Pedal glockenspiels, which use a pedal to control sustain, were growing in popularity. Many front ensembles replaced box bells (or a traditional glockenspiel) with pedal glockenspiels. Another trend that became popular in the 2000s was combining the xylophone and glockenspiel into one station, to be played by one performer. This is most commonly done by mounting a piccolo xylophone on a pedal glockenspiel, mounting a set of box bells on a xylophone, or by having two full size concert instruments next to one other. These instruments have been commonly combined into one performance

¹²² Timothy Heath, “A Look Behind: A Conversation with Iain Moyer, Front Ensemble Arranger and Supervisor for the Cadets.” *Percussive Notes* 52, no. 3 (May 2014), 9.

position because they are considered “color instruments” in the front ensemble, and they do not need to be used the entire show.¹²³

Spirit of JSU (formally, and currently named “Spirit of Atlanta”) was the first drum corps competing in DCI Finals to use five marimbas in 2006. This is a trend that has continued; today five marimbas are used by many front ensembles. In 2008 DCI changed a rule that increased the size of drum corps units from 135 members, to 150 members. Many drum corps decided to add more performers to the front ensemble. The increased number of front ensemble members had an impact on the standard front ensemble instrumentation. In 2008 more groups began using five marimbas and five vibraphones; there was not a single drum corps competing in the 2008 DCI Finals that used less than four vibraphones or less than four marimbas. Table 10 illustrates the average front ensemble instrumentation for drum corps competing in DCI Finals from 2004 to 2008.

¹²³ Johnson, Interview with the Author, December 9, 2015.

2004

1 Glockenspiel
1 Xylophone
3-4 Vibraphones
3-4 Marimbas
1-2 Sets of Timpani
0-2 Percussion Stations
0-1 Drum Set
(10-12 members, 11 on average)

2005

1-2 Glockenspiel
1-2 Xylophones
3-4 Vibraphones
3-4 Marimbas
1-2 Sets of Timpani
0-2 Percussion Stations
0-1 Drum Set
(9-13 members, 10-11 on average)

2006

1-2 Glockenspiel
1 Xylophone
3-4 Vibraphones
3-5 Marimbas
1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(9-13 members, 11 on average)

2007

1-2 Glockenspiel
1-2 Xylophones
3-5 Vibraphones
3-4 Marimbas
1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(10-12 members, 11 on average)

Continued

Table 10: The average front ensemble instrumentation of drum corps competing in DCI Finals from 2004 to 2008.

Table 10 Continued

2008

1 Glockenspiel
1 Xylophone
4-5 Vibraphones
4-5 Marimbas
1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(9-13 members, 12 on average)

The incorporation of amplification would affect the way many front ensembles set up. Initially there was a lot of experimentation with how, and where to set up the sound equipment. For a few years the Blue Devils experimented by having a powered speaker with a built in mixer mounted to the front of every mallet instrument. Other groups would experiment with placing speakers in front of the ensemble, or in between instruments inside of the ensemble. In 2009 the Blue Knights placed speakers behind the field, creating a surround sound effect. The Bluecoats would place several speakers on the field in 2015, creating a number of surround sound and panning effects.

Experiments were also done with sound board placement within the ensemble setup from 2004-2006, until a staff member was allowed to operate the sound board in 2007. Today the majority of front ensembles place the sound board in front of the pit, near the stands. Most groups have their speaker stacks on either side of the ensemble setup. A lot of experimentation continues today with the type of sound equipment used, the number of speakers used, and where the speakers are placed.

Chapter 6
“The Age of Electronics”
2009-2015

In 2009 Drum Corps International rules changed again, this time allowing the use of electronic instruments in competition. Historically this rule was very significant for the entire drum corps community. For an activity that defines its identity by its instrumentation, the addition of an entirely new family of instruments is very impactful.

The incorporation of electronic instruments would have a large impact on drum and bugle corps. It would change the instrumentation of the front ensemble, expand the sonic possibilities, and change the way music was written for the entire drum corps because of the new musical capacity of the front ensemble. All of these changes would have an influence on the way drum corps shows are designed.

The Electronic Instrument Rule

The incorporation of electronic instruments was another innovation spearheaded by Cadets Director George Hopkins. Amplification passed once it was voted on separately from electronic instruments, however George Hopkins was not ready to stop

pursuing the inclusion of electronic instruments.¹²⁴ Hopkins, and others, believed that electronic instruments would broaden sound possibilities and ultimately attract new audiences.¹²⁵ In January of 2009 a new section was added to the DCI Rule Book for electronic instruments:

4.8 Use of Electronic Equipment

4.8.1 Terminology:

- “Music” (or “Musical”) shall be defined as the organization of melodic, harmonic and/or rhythmic sound through time.
- An “Electronic Instrument” shall be defined as any pieces of electronic equipment that produces a “Musical” sound.
- A “Sequence” or “Loop” shall be defined as “Music” that is pre-recorded or programmed during a performance.
- “Human Voice” shall be defined as spoken word.

4.8.2 Music from Electronic Instruments is allowed given that the Music is being performed live, in real time during the performance.

4.8.3 Sequenced Music will not be allowed.

4.8.4 Musical Loops will not be allowed.

4.8.5 Pre-recorded Sound Effects and Human Voice can be used without Penalty. Permission must be obtained for all copyrighted material.¹²⁶

¹²⁴ Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 40.

¹²⁵ Ibid.

¹²⁶ “Rules up, down, overturned and clarified during annual vote,” DCI.org, 24 January 2009, http://www.dci.org/ViewArticle.dbmlDB_LANG=C&DB_OEM_ID=33500&ATCLID=209940261&SPID=166025&SPSID=965782 (accessed January 2, 2016).

Electronic Instruments

As stated previously, electronic instruments were allowed to be used in DCI front ensembles starting in 2009. Front ensembles have used a wide variety of electronic instruments including: synthesizers, MIDI controllers, MIDI mallet percussion controllers, electronic drums, and samplers. The use of electric guitar and bass guitar is very popular for front ensembles in marching bands and indoor drum lines. However, as of 2015 guitars have never been used by a drum corps competing in DCI Finals.

Synthesizers and MIDI Controllers are the most common electronic instruments used by front ensembles. The most popular form is a piano-style keyboard. These keyboard controllers can have up to 88 keys. Many have weighted action keys to imitate the natural feel of a piano.¹²⁷ These instruments often come with pre-loaded sounds, however there are numerous ways users can create their own sounds. Most commonly computers are used to produce the sound, with software such as *Logic* or *MainStage*.

MIDI mallet percussion controllers were used in a limited number of front ensembles from 2009 to 2014. MalletKAT (manufactured by Alternate Mode) and Xylosynth (manufactured by Wernick Ltd.) are the major brands of MIDI mallet percussion controllers. The playing surface is oriented like a xylophone, and the triggers are struck with a wrapped keyboard mallet.¹²⁸ These instruments come in models that range from two octaves to five octaves. Computers are used to produce the sound for the

¹²⁷ Jim Ancona and Jim Casella, *Up Front: a complete resource for today's pit ensemble*. Portland, Or: Tapspace Publications (2003): 74.

¹²⁸ Ibid.

MalletKAT and Xylosynth. The Xylosynth also incorporates a “Long Sustain Pedal,”¹²⁹ which allows the user to control sustain similar to the pedal on a vibraphone.

A sampler is another electronic instrument often used in the front ensemble. A sampler uses recorded sounds, or electronically generated sounds that are loaded onto the instrument’s memory bank. “Samples” are triggered by the performer by striking a pad, or pressing a button.



Figure 16: Bluecoats 2010 Synthesizer (Photograph used with permission of the photographer, photo by Matt Millet.)

¹²⁹ Xylosynth website. <http://www.wernick.net> (accessed January 7, 2016).

Changes in Instrumentation

There were multiple changes in the instrumentation of the front ensemble that occurred between 2009 and 2015. Some of these changes were influenced by the incorporation of electronic instruments, and the ability to substitute acoustic sounds electronically. This led to fewer drum corps using exotic instruments, or creating sound effects acoustically. Bulky instruments like timpani and chimes would be substituted with electronic instruments in some front ensembles.

The number of members, and the type of member performing in the front ensemble continued to change. On average, the incorporation of electronic instruments added one or two performers to the front ensemble in every drum corps. It also changed the type of student that is participating in drum corps. Pianists now had the opportunity to perform in a drum and bugle corps. The addition of electronic instruments created opportunities for more instrumentalists to participate in drum corps.

Typically, each front ensemble has one or two synthesizers. This is most often a specialized position, with a performer designated to that instrument for the entire show. Some groups have experimented with having a small synthesizer or MIDI controller mounted on a mallet instrument, or on the percussion rack. Since 2009 every drum corps competing in DCI Finals has used a synthesizer (or MIDI controller) in their front ensemble.

Samplers are also common in today's front ensemble, most commonly in the form of a sampling pad or electronic drum pad. These samplers are often used on the percussion rack, drum set, or they are mounted on a mallet percussion instrument. Front

ensembles typically have one or two samplers, although there have been groups who have used several more.

There was some experimentation with MIDI mallet percussion controllers from 2009 to 2014. The Cadets, Bluecoats, and Blue Stars have all experimented with using these instruments. The Bluecoats and Blue Stars experimented with them for a couple of years, while the Cadets used one from 2009 through 2014. In 2015 there was not a single drum corps competing in DCI Finals that used a MIDI mallet percussion controller in their front ensemble.

Exotic instruments and acoustically produced sound effects have been phased out of use, but not entirely. In the Cavaliers 2008 production *Samurai*, Erik Johnson and Jim Casella “worked really hard to have all of these authentic instruments, and all of these different colors created acoustically without the use of electronics. You see that a little bit in drum corps now but you don’t see it as much as you use to.”¹³⁰ This is because of the ability to easily recreate any sound using electronic instruments. You can now produce any sound effect or exotic instrument with the touch of a button.

With the addition of electronic instruments, some drum corps would replace “bulky” instruments like timpani, chimes, and concert bass drums with synthesized sounds. These instruments are very delicate. They require great care to move and maintain. With the ability to sample chime notes, or to have a synthesizer cover low register notes for the front ensemble, some instructors and designers consider traveling

¹³⁰ Johnson, Interview with the Author, December 9, 2015.

around the country with expensive, delicate, and bulky instruments to not be worth the trouble.

In addition to the newly expanded electronic instrumentation, the number of traditional front ensemble instruments continued to rise in many front ensembles. Sandi Rennick used six vibraphones in some of her front ensembles. She also experimented with using four five-octave rosewood marimbas in 2011 with the Santa Clara Vanguard. Andrew Markworth experimented with using six marimbas at Carolina Crown in 2014; this was the only time this many concert marimbas have been used in drum corps. The use of glockenspiel (or bells) and xylophone has declined. Table 11 illustrates the average front ensemble instrumentation for drum corps competing in DCI Finals from 2009 to 2015.

2009

1-2 Synthesizers

1 MalletKAT

1 Glockenspiel

0-1 Xylophone

4-6 Vibraphones

4-5 Marimbas

0-1 Set of Timpani

0-2 Percussion Stations

0-1 Drum Set

(11-15 members, 12-13 on average)

Continued

Table 11: The average front ensemble instrumentation of drum corps competing in DCI Finals from 2009 to 2015.

Table 11 Continued

2010

1-2 Synthesizers
0-1 MalletKAT/Xylosynth
1 Glockenspiel
1 Xylophone
4-6 Vibraphones
4-5 Marimbas
0-1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(12-15 members, 13 on average)

2011

1-2 Synthesizers
0-1 MalletKAT/Xylosynth
1-2 Glockenspiel
1 Xylophone
4-6 Vibraphones
4-5 Marimbas
0-1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(11-15 members, 13 on average)

2012

1-2 Synthesizers
0-1 MalletKAT/Xylosynth
1 Glockenspiel
0-1 Xylophone
4-5 Vibraphones
4-5 Marimbas
0-1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(10-15 members, 13 on average)

Continued

Table 11 Continued

2013

1-2 Synthesizers
0-1 MalletKAT/Xylosynth
1 Glockenspiel
0-1 Xylophone
4-5 Vibraphones
4-5 Marimbas
0-1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(12-16 members, 13 on average)

2014

1-2 Synthesizers
0-1 MalletKAT/Xylosynth
1 Glockenspiel
0-1 Xylophone
4-5 Vibraphones
4-6 Marimbas
0-1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(12-16 members, 13-14 on average)

2015

1-2 Synthesizers
1 Glockenspiel
1 Xylophone
4-6 Vibraphones
4-5 Marimbas
0-1 Set of Timpani
0-2 Percussion Stations
0-1 Drum Set
(12-15 members, 13-14 on average)

The incorporation of electronic instruments had an impact on how front ensembles setup. Most commonly, synthesizers are placed in the back row near the center

of the pit. This was done with ensemble timing in mind by the synthesizer player having a strong listening position in the center of the ensemble. Other groups have placed synthesizers on the outside of the setup, with the performer facing into the center of the ensemble.

Expanded Sonic Possibilities

The most significant development with the addition of electronic instruments is the ability to use sounds and colors that had never been available to a front ensemble. Drum corps now had the option to include any sound they wanted through electronics; previously being limited to sounds that could be produced by brass instruments, percussion instruments, or the human voice.

The sound of any instrument can now be produced electronically. This means that the sound of acoustic instruments that are not allowed to be used in DCI competition can be used through electronic instruments. An example of this can be seen in 2009, when Phantom Regiment used the sound of a violin extensively in their production of *The Red Violin*.

Sampled sounds are now allowed to be used in DCI competition, as long as each sound is triggered by a separate attack on the instrument.¹³¹ This stipulation is often referred to as the “one stroke per sound” rule. As stated in the electronic instrument

¹³¹ Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 21.

section of the DCI Rule Book, a distinction is made between musical and non-musical sounds. An example of a “non-musical sound” could be a recording of someone speaking, which is permitted. A recording of someone singing would be considered a “musical sound,” and is prohibited.¹³²

This however would not stop designers from discovering ways to use pre-recorded “musical sounds” in a legal way. Musical sounds can be used, if each individual note or syllable is triggered by a separate attack. Bluecoats, who have been on the forefront of electronic use in the drum corps activity,¹³³ used a recording of a woman singing the vocal introduction to Imogen Heap’s *Aha!* in their 2010 production *Metropolis*.

The introduction to *Aha!* featured a women's voice singing a melodic line from the original recording. Kevin Shah, who was the electronics designer, cut that melodic line into one and two note groupings.¹³⁴ The performer had to trigger each vocal syllable separately on a sampling pad. The way that Shah incorporated a woman singing from an original recording into a drum corps show, is just one example of how limitless the creative opportunities are for technology in the front ensemble.

Electronic instruments can also create unique sound effects that previously would have been very hard, if not impossible to achieve. For example, Santa Clara Vanguard

¹³² Ibid.

¹³³ Kilgore, Interview with the Author, December 15, 2015.

¹³⁴ Ibid.

created a “helicopter effect” using drums in their 1991 production of *Miss Saigon*.¹³⁵

Today the sound of a helicopter can be sampled. With the push of a button the audience would hear the sound of a real helicopter, providing an even higher level of effect to show design. As stated previously, the opportunities for creative use of this technology are limitless.

The addition of new technology also made it possible for front ensemble to create electronic soundscapes. A soundscape is defined as “the component sounds of an environment.”¹³⁶ Electronic soundscapes have the capability of being more complex and authentic than any soundscape created acoustically. Drum corps are now capable of electronically creating the sonic atmosphere of any place in the universe. Soundscapes can make the establishment of a mood very effective.

As a part of the electronic instruments rule, pre-recorded narration was now allowed. Previously, any narration that was used had to be performed live. The ability to use pre-recorded narration opened many new creative possibilities. If a designer wanted, they could design a show around a speech given by President Kennedy, and they could include recordings of Kennedy speaking in their performance. This is just one example of how pre-recorded narration could be used.

¹³⁵ Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 31.

¹³⁶ soundscape. Dictionary.com. Dictionary.com Unabridged. Random House, Inc. <http://dictionary.reference.com/browse/soundscape> (accessed January 07, 2016).

Drum corps were also provided with the chance to digitally process sounds through a computer that are being played into a microphone. This is commonly done to add special effects to brass instruments. Performers play into a microphone that is connected to a computer. Through the use of computer software, the sound of the instrument can be altered in a wide variety of ways. In 2010, the Bluecoats added distortion to a brass soloist in their performance of *Asphalt Cocktail*.

Continued Growth in Performers

The development of playing technique is one of the most substantial long term developments in the history of the front ensemble. When front ensembles began to emerge they were not playing with the same techniques, nor were they achieving the same quality of sound as musicians who were performing at the highest level of concert or classical percussion. Dr. Ian Moyer, who is currently the front ensemble arranger and supervisor for the Cadets, stated that “One of the most important and ongoing accomplishments (of the front ensemble) is the implementation of legitimate concert percussion techniques.”¹³⁷ In the last few years, this progress has accelerated greatly.¹³⁸

The students who are marching drum corps today have much more experience than performers in the past. Not only do today’s performers have more opportunities to perform in WGI indoor percussion ensembles than previous generations, but many of

¹³⁷ Timothy Heath, “A Look Behind: A Conversation with Iain Moyer, Front Ensemble Arranger and Supervisor for the Cadets.” *Percussive Notes* 52, no. 3 (May 2014), 6.

¹³⁸ *Ibid.*

them are also college students who are majoring in music.¹³⁹ Through the cross-pollination of academics and the marching arts, today's instructors and performers are much more knowledgeable about modern technical and musical developments in the percussion community as a whole.¹⁴⁰

Iain Moyer stated that: "The 'four-mallet revolution' of the early 2000s has front ensemble books in the 2010s sounding more like 'four-mallet marimba solos on steroids' than the two-mallet passagework that dominated the virtuosic passages of the 1980s and 1990s." Andrew Markworth wrote marimba parts that required the use of six mallets for the 2014 Carolina Crown show. Six mallet marimba technique is very advanced, and would have been considered impossible for front ensembles of the past. Today the technical demand placed on front ensemble performers continues to rise.

Despite developments in education and approach, there are still values of earlier front ensembles that remain part of marching percussion today.¹⁴¹ Matthew Kilgore stated that:

"There's an ideal in drum corps, in all of drum corps, that the front of the note should be as much like a snare drum as possible. A marching snare drum. As far as vertical alignment, a lot of people like to hear clarity with a crispness on the left side of the note. Which is why I think articulation has become something that we strive for in the front ensemble. More articulation makes it readable and clean, but it also eliminates a significant number of ways that the marimba can sound."¹⁴²

Opinions differ as to whether or not using a concert technique is an appropriate goal for drum corps front ensembles. Some would consider the legitimacy of drum corps

¹³⁹ Ibid.

¹⁴⁰ Ibid.

¹⁴¹ Ibid.

¹⁴² Ibid.

as a form of musical performance to be at stake.¹⁴³ For those who agree with George Hopkins or Dennis DeLucia, legitimacy is achieved through bringing drum corps closer to symphonic music. They value the fact that the skills performers are learning in a front ensemble will transfer to “serious types of music.”¹⁴⁴ “For traditionalists like Ken Mason, the legitimacy of drum corps comes from its unique traditions and performance practices.”¹⁴⁵ They believe that traditions set drum corps apart from of types of musical performance.¹⁴⁶

Although some of the developments occurring in the last thirty years are still tied to older marching percussion traditions; the influence from classical percussion, concert percussion, world percussion, and popular music (to name a few) have helped to shape the front ensemble into a mature musical ensemble.

Developments in Music Arranging and Show Design

The incorporation of electronic instruments had a major impact on the way music is arranged for drum corps, and the way shows are designed. The use of electronic instruments provided drum corps designers with sonic possibilities, and an expanded music repertoire that was not present in drum corps before. “The biggest change for the designers was now that electronics were allowed, the designers had a whole new pallet of

¹⁴³ Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 51.

¹⁴⁴ Ibid.

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

colors to chose from to help them get their ideas understood by the audience.”¹⁴⁷ More so than ever before, the front ensemble became a fully functional music ensemble within the larger ensemble of the drum corps.

When electronics came into the front ensemble they, like many instruments in the front ensemble, were primarily used to add color. They were often used to add color to a pre-existing musical line. Arrangers took either a vibe line, or a marimba line in the front ensemble and enhanced it with electronic instruments. Electronic instruments also provided support to the brass, the tuba voice in particular. Adding color and support continues to be one of the functions of a front ensemble today.

Electronic soundscapes have been used for significant portions of drum corps shows. An example of this can be seen in the Cavaliers 2010 production *Mad World*. The show starts with an extensive soundscape creating a very dark, and reflective mood. The soundscape included narration from the movie *Full Metal Jacket* featuring an excerpt from a famous scene during basic training when the soldiers are all speaking a line that starts with “this is my rifle, there are many like it but this one is mine.” Soundscapes have been used in many different ways, making the communication of show concepts more effective.

A new repertoire of music is now available to be performed by drum corps. Music that features piano, or music written for strings can now be performed using authentic sounds. An example of this can be seen in 2011 when Andrew Markworth designed a

¹⁴⁷ Chris Koenig, “Growth of the Modern Front Ensemble Through the Expanded Use of Electronics from 2000-2013,” (Morehead State University, 2014), 16.

show that featured portions of a Sergei Rachmaninov piano concerto. Electronic music is also able to be performed with stylistically appropriate instruments. The Blue Devils included a segment of electronic dance music in 2015. Again, the creative possibilities of what can be done with electronic instruments in drum corps is endless. “Modern show design aligns with DCI's goal of highlighting advanced technical ability and artistic sophistication, but for those who preferred straightforward shows with recognizable music, today's DCI shows are esoteric and fail as entertainment.”¹⁴⁸

The incorporation of amplification and electronic instruments alongside the continued growth in the maturity level of performers, have made the front ensemble a fully functional musical ensemble within the larger ensemble of the drum and bugle corps. Today, front ensembles have the capability to carry extended musical moments. The ways that amplification and electronic instruments are used will continue to be the most rapid area of development within the front ensemble. James Campbell stated that for the future of the front ensemble, and drum corps in general, he envisioned “much more use of sound design (electronic and acoustic).”¹⁴⁹

¹⁴⁸ Erin Maher, “The Amplification Controversy in Drum Corps International: Technological Change and the Meaning of Tradition,” (MA Thesis, University of North Carolina at Chapel Hill, 2011), 23.

¹⁴⁹ Campbell, Interview with the Author, November 6, 2015.



Figure 17: Rhythm X 2016 Front Ensemble. (Photograph taken by the Author)

Conclusion

The front ensemble has evolved over the last thirty-five years into a mature form of percussion performance. Modern front ensemble performers are playing with techniques that can be compared to those used by professionals in the most advanced levels of music. This is a stark contrast to the performers in the 1980s and 1990s who were playing with an approach that could be considered heavy handed, often unmusical, and inappropriate for collegiate or professional musicians. The front ensemble began as a section that mainly provided color to the music on the field, with performers whose playing ability and musicianship could be considered novice. Today the front ensemble has an equal to, if not more prominent voice than any other section in the drum corps music ensemble. The development of electronic instruments and amplification expanded the sound pallet of the front ensemble to a level that was previously impossible.

When the “pit-box” was established in 1982, the front ensemble functioned in the same way as the marching mallet or timpani sections. In the 1980s, the “orchestral front ensemble” developed. These front ensembles were based around the idea that the front ensemble would function like the percussion section in a wind band or orchestra. In the orchestral ensemble everyone would play all of the instruments in the pit, switching instruments multiple times during a performance.

In the 1990s the “pod percussion” front ensemble evolved, where performers had individual stations. The orchestral front ensemble concept of “everyone plays everything” evolved into the pod-concept of “one person plays everything.” These ensembles would place every performer at one station for the entire show, a multi-percussion setup that was built around their primary mallet instrument or timpani. In these ensembles performers would still cover parts on a variety of instruments, however they would remain stationary the entire show.

In the late 1990s and early 2000s the front ensemble evolved so that groups used “specialized percussionists.” In these ensembles, performers specialize on one instrument that they play exclusively. Performers who specialize on one instrument achieve a higher level of mastery than those who play several instruments. This is the model of front ensemble that most drum and bugle corps use today.

The front ensemble continues to evolve as a musical ensemble. The quality of the musicians and instructors have and will continue to grow, as will the quality of the music being arranged. The front ensemble has developed from a section that didn't exist, to a novelty section that would accompany or add color, to a music ensemble that can function independently from any section of the drum corps.

Need for Further Research

There is a large amount of research that still needs to be conducted on the history of the front ensemble. Further research should include the holistic development of the front ensemble, tracing the history and relationship of the ensembles in drum and bugle corps, marching band (both high school and collegiate), and indoor marching percussion ensembles. Further research could also include drum corps who are competing in circuits other than DCI, and could also include every drum corps competing in different competitive divisions of DCI.

A detailed outline of instructors and designers, creating a “family tree” of concepts and ideas should be completed, as should a detailed analysis of the development of front ensemble arranging and composition. A study of how the development of the front ensemble has affected the way marching band, drum corps, and indoor drum line shows are designed should also be conducted. The role that the music industry has played in the development of the front ensemble, and drum corps as a whole, could be a major research project.

The amount of scholarly work that focuses on marching percussion is very limited, especially when compared to the research completed that focuses on other areas of percussion. In order for marching music to be accepted on the same level as other

genres of music in academia, there must be a new wave of researchers who contribute on the same level as scholars who focus on other areas of music.

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Appendix A

Front Ensemble Instrumentation from Drum Corps International World Class/ Division I Finals (1974-2015)

1974

The video resource used to document instrumentation is incomplete for 1974, as a result the instrumentation for three of the groups competing in the 1974 DCI Finals is unknown.

1) Santa Clara Vanguard

Marching Bells

Marching Xylophone

4 Marching Timpani

2) Madison Scouts

Marching Xylophone

4 Marching Timpani

3) Kingsmen

Marching Xylophone (2 chime notes mounted on the front)

Marching Bells

5 Marching Timpanist

4) Muchachos

Marching Bells

4 Marching Timpani

5) Troopers

Marching Xylophone

Marching Bells

4 Marching Timpani

6) Kilties

Marching Bells

4 Marching Timpani

7) De La Salle Oaklands

5 Marching Timpani

8) The Cavaliers

(Instrumentation unknown)

9) Blue Devils

(Instrumentation unknown)

10) Purple Lancers
Marching Bells
Marching Xylophone
2 Marching Timpani

11) Phantom Regiment
4 Marching Timpani

12) Blue Stars
(Instrumentation unknown)

1975

1) Madison Scouts
Marching Bells
Marching Xylophone
5 Marching Timpani

2) Santa Clara Vanguard
Marching Bells
Marching Alto Bells
4 Marching Timpani

3) Blue Devils
Marching Bells
Marching Xylophone
5 Marching Timpani
Marching Timbales

4) 27th Lancers
Marching Bells
Marching Chimes
4 Marching Timpani

5) Blue Stars
Marching Bells
Marching Xylophone
4 Marching Timpani

6) Oakland Crusaders
Marching Bells
Marching Xylophone
5 Marching Timpani

7) Kilties

Marching Bells
Marching Xylophone
6 Marching Timpani

8) The Cavaliers

Marching Bells
Marching Xylophone
4 Marching Timpanist

9) Royal Crusaders

Marching Xylophone
Marching Bells
4 Marching Timpani
- Tenor drums have chime notes mounted on them.

10) Phantom Regiment

Marching Bells
5 Marching Timpani

11) Garfield Cadets

Marching Bells
4 Marching Timpani

12) Troopers

Marching Xylophone
4 Marching Timpani

1976

1) Blue Devils

Marching Bells
Marching Alto Bells
5 Marching Timpani

2) Madison Scouts

Marching Bells
Marching Xylophone
5 Marching Timpani

3) Santa Clara Vanguard

Marching Bells
Marching Alto Bells
4 Marching Timpani

4) Phantom Regiment

Marching Bells
Marching Xylophone
4 Marching Timpani

5) 27th Lancers

Marching Bells
Marching Xylophone
Marching Chimes
4 Marching Timpani
Marching Tam-tam

6) Bridgemen

Marching Bells
Marching Xylophone
4 Marching Timpani

7) The Cavaliers

Marching Bells
Marching Xylophone
4 Marching Timpani

- each cymbal player has a chime note strapped behind their back.
- there were additional chime notes that were carried out and set down near the front of the field.

8) Oakland Crusaders

Marching Bells
Marching Xylophone
5 Marching Timpani

9) Blue Stars

Marching Bells
Marching Xylophone
5 Marching Timpani

10) Seneca Optimists

Marching Bells
Marching Xylophone
5 Marching Timpani

11) Capital Freelancers

Marching Bells (2 chime notes mounted on them)

Marching Xylophone

4 Marching Timpani

- Marching “multi-percussion” setup with timbales and bongo

12) Guardsmen

Marching Bells

Marching Xylophone

5 Marching timpani

- The cymbal players have chime notes strapped to their backs.

1977

* Marching marimba and vibraphone are now legal.

1) Blue Devils

Marching Xylophone

Marching Vibraphone

5 Marching Timpani

2) Phantom Regiment

Marching Bells

Marching Xylophone

5 Marching Timpani

3) Santa Clara Vanguard

Marching Bells

Marching Vibraphone

5 Marching Timpani

4) 27 Lancers

Marching Bells

Marching Vibraphone

5 Marching Timpani

- Marching Timbales

5) Madison Scouts

Marching Bells

Marching Xylophone

5 Marching Timpani

- Marching Roto-toms

6) Blue Stars

Marching Bells
Marching Marimba
5 marching Timpani

7) The Cavaliers

Marching Bells
Marching Marimba
5 marching Timpani

8) Capital Freelancers

Marching Bells (2 chime notes mounted on them)
Marching Xylophone
5 Marching Timpani

9) Seneca Optimists

Marching Bells
Marching Marimba
4 marching Timpani
- Marching Conga line (4 performers)
- Marching Bongo line (2 performers)

10) Kilties

Marching Bells
Marching Xylophone
4 marching Timpani

11) Crossmen

Marching Bells
Marching Xylophone
4 Marching Timpani

12) Garfield Cadets

Marching Bells
Marching Xylophone
4 Marching Timpani
- One performer is marching a set of bongo, with a timbale on either side.

1978

- Drum corps are now allowed to use up to four mallet percussionists.
- Another rule change in 1978 allowed drum corps to start their show from anywhere on the field. This is significant because for the first time instruments could be left on the field for the entire performance. Prior to this rule change all performers (and their instruments) had to start the show from behind the back sideline.

1) Santa Clara Vanguard

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
5 Marching Timpani

2) Phantom Regiment

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani

3) Blue Devils

Marching Bells
Marching Xylophone
Marching Vibraphone
5 Marching Timpani

4) Madison Scouts

Marching Bells
Marching Xylophone
5 Marching Timpani
- Marching Roto-toms

5) Bridgemen

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani
- Marching Roto-toms

6) Spirit of Atlanta

Dan Spaulding was the arranger

Marching Vibraphone/Xylophone (the instrument had two sides)

Marching Bells

5 Marching Timpani

7) 27th Lancers

Marching Bells

Marching Xylophone

Marching Vibraphone

Marching Chimes

2 Sets of Stationary Timpani (2 performers - each with three drums on the 40 yard lines)

8) Blue Stars

Marching Bells

Marching Marimba

5 Marching Timpani

9) Crossmen

Marching Bells

Marching Marimba

4 Marching Timpani

10) North Star

Marching Xylophone

Marching Marimba

Marching Vibraphone

5 Marching Timpani

- One of the few to use stationary percussion instruments this year, although they did not use them the entire show. Almglocken, timbales, temple blocks, single headed toms.

11) Guardsmen

James Campbell

Marching Bells

2 Marching Xylophone

Marching Marimba

4 Marching Timpani

Set of Stationary Chimes

12) Kilties

Marching Bells

Marching Xylophone

Marching Vibraphone

Marching Marimba

1 Timpani (1 performer, four pedal timpani, right on the 50 behind the front sideline)

1979

1) Blue Devils

Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani

2) Phantom Regiment

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani
Tam-tam - they brought a gong out and sat it on the front sideline before the show. The drum major picked it up and played it.

3) Santa Clara Vanguard

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
5 Marching Timpani

4) Spirit of Atlanta

Marching Bells
Marching Marimba
Marching Vibraphone
5 marching Timpani

5) 27th Lancers

Marching Bells
Marching Xylophone
Marching Chimes
5 Marching Timpani

6) Bridgemen

Dennis DeLucia
Marching Bells
Marching Marimba
Marching Vibraphone
4 Marching Timpani
Marching Roto-toms
- suspended cymbal on a stand by the front sideline.

7) Guardsmen

James Campbell

Marching Bells

2 Marching Xylophones

Marching Vibraphone

1 Stationary Percussionist. (Congas, 4 hand cranked timpani, concert chimes, wind chimes, concert marimba.)

8) Madison Scouts

Marching Bells

Marching Xylophone

Marching Vibraphone

5 Marching Timpani

9) North Star

Marching Xylophone

Marching Marimba

Marching Vibraphone

4 Marching Timpani

10) Blue Stars

Marching Bells

Marching Xylophone

Marching Marimba

Marching Vibraphone

5 Marching Timpani

11) The Cavaliers

Marching Bells

Marching Xylophone

Marching Marimba

Marching Vibraphone

5 Marching Timpani

stationary Chimes

12) Troopers

Marching Bells

Marching Xylophone

Marching Marimba

4 Marching Timpani

1980

1) Blue Devils

Marching Bells

Marching Xylophone
Marching Marimba
Marching Vibraphone
Stationary Pedal Timpani (4 drums, played by one performer)

2) 27th Lancers

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani

3) Bridgemen

Marching Bells
Marching Xylophone
Marching Vibraphone
Stationary Timpani (set of four, hand cranked)
- Small pod of stationary percussion instruments on side one. (Set of timbales with a cowbell, Roto-toms on stand, suspended cymbal.)

4) Spirit of Atlanta

Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani

5) Phantom Regiment

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani

6) Madison Scouts

Marching Bells
Marching Marimba
Marching Vibraphone
4 Marching Timpani

7) Santa Clara Vanguard

Marching Bells
Marching Xylophone
Marching Marimba

Marching Vibraphone
4 Marching Timpani

8) Crossmen

Marching Bells
2 Marching Marimbas
Marching Vibraphone
Stationary Timpani (4 drums, hand cranked)
Stationary Vibraphone (concert instrument)
- Roto-toms on a stand in the front.

9) The Cavaliers

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
Stationary Timpani (hand cranked, 5 drums, only used 2nd half of show)

10) Garfield Cadets

Marching Bells
Marching Xylophone
Marching Vibraphone
Stationary Timpani (5 drums, hand cranked, played by 4 different people)

11) North Star

Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani

12) Guardsmen

Marching Bells
Marching Vibraphone
2 Marching Xylophones
Marching Marimba (on a stand for some of the show, marched on the field for some)
Stationary Chimes
Stationary Timpani (4 drums, hand cranked)
- Stationary Conga

1981

- It can be assumed that timpani are played by one person, unless otherwise stated.

- I will document how many members are in the front ensemble. For someone to count as a “member,” they must perform the entire show in the front ensemble.

1) Madison Scouts

Marching Bells
Marching Marimba
Marching Vibraphone
Stationary Timpani (4 drums, balanced action)

2) Blue Devils

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
Stationary Timpani (5 drums, balanced action)

3) Santa Clara Vanguard

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
Stationary Timpani (5 drums, balanced action)

4) Phantom Regiment

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani
Stationary Chimes (front sideline, on side 1)
Stationary Tam-tam (front sideline, on side 2)
Stationary Tam-tam (on back sideline)

5) 27th Lancers

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
4 Marching Timpani

6) Garfield Cadets

Marching Bells (on a stand)
Marching Xylophone (on a stand)

Marching Vibraphone (on a stand)
Stationary Timpani (5 drums, balanced action)
Percussion
(5 members)

- All of the keyboard percussion and timpani are stationary for the first time. They were all marching instruments on stands.

7) Bridgemen

Marching Bells
Marching Xylophone
Marching Vibraphone
Stationary Timpani (4 drums, hand cranked, played by 2 performers)
(5 members)

- The keyboards were stationary for the first half of the show, and were marched for the second half.

8) The Cavaliers

Marching Bells
Marching Xylophone
Marching Vibraphone
Marching Marimba
Stationary Chimes
Drum set (standard 5 piece, this is the first time we see a drum set in DCI)
Stationary Timpani (4 drums, balanced action)
(2 members)

9) Crossmen

Marching Bells
Marching Vibraphone
2 Marching Marimbas
Stationary Timpani (4 drums, balanced action)

10) Spirit of Atlanta

Stationary Xylophone
Stationary Vibraphone
Stationary Timpani (4 drums, balanced action)
(3 members)

11) Troopers

Marching Bells
Marching Xylophone
Marching Marimba
5 Marching Timpani

12) Sky Ryders

Marching Bells

Marching Xylophone

Marching Vibraphone

Stationary Bass marimba

Stationary Timpani (3 drums, hand cranked)

1982

- I will not specify at this point if an instrument is “stationary.” However, I will specify if it is a marching instrument that is stationary on a stand, or if they are marching that instrument.

1) Blue Devils

Bells (marching instrument on a stand)

Xylophone (marching instrument on a stand)

Marimba (marching instrument on a stand)

Vibraphone (marching instrument on a stand)

Timpani (balanced action, 5 drums)

(5 members)

2) Santa Clara Vanguard

Marching Bells

Marching Xylophone

Marching Marimba

Marching Vibraphone

Stationary Timpani (5 drums, balanced action)

Stationary Chimes

4 percussion stations w/: suspended cymbals

- one station had toms

- one station had timbales

3) Garfield Cadets

- Percussion on side 1, timpani in the middle, mallet instruments on side 2.

Bells

Xylophone

Vibraphone

Marimba

Timpani (4 drums, balanced action)

Percussion

(5 members)

4) Phantom Regiment

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
2 sets of Timpani (hand cranked set of 4, one member performing each, splitting the 50)
2 tam-tam
Stationary Chimes
(2 members)

5) Madison Scouts

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
Timpani (4 balanced action drums)
(6 members, after the mallet players park their instruments)
- After a short introduction the keyboard players came to the front and put their instruments down on stands, over on side one. They stand here in a straight line for the rest of the show.

6) 27th Lancers

- Keyboards in a straight line, timpani on the right. Chimes to the left, tam-tam back center.
Bells (stationary on stand)
Marching Xylophone (stationary on stand)
Marching Marimba (stationary on stand)
Vibraphone (concert instrument)
4 Marching Timpani
Tam-tam
Chimes
(4 members - mallet players)
- They staged the timpani up front on their legs for the first half of the show; after the percussion feature four members picked up the timpani and started marching the drums.

7) Crossmen

Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
Timpani (4 balanced action drums)
1 Percussion station (one performer played cymbals, hand held instruments, timbales, bongo, wind chimes.)
(2 members)

8) Bridgemen

Dennis DeLucia

- Timpani and percussion on the left, keyboards on the right.
Xylophone (concert instrument)
2 Vibraphones (concert instrument)
Timpani (4 hand cranked drums)
Drum set (no bass drum, just cymbals and a snare drum).
(5 members)

9) Freelancers

- Arc with timpani in the middle, keyboards on either side.
Marching Bells (stationary whole show on stand)
Marching Xylophone (stationary whole show on stand)
Marching Marimba (stationary whole show on stand)
Marching Vibraphone (stationary whole show on stand)
Timpani (4 balanced action drums)
Chimes
Tam-tam
(5 members)

10) Sky Ryders

Marching Bells (stationary whole show on stand)
Marching Xylophone (stationary whole show on stand)
Marching Marimba (stationary whole show on stand)
Timpani (2 hand cranked drums)
(3 members)

11) The Cavaliers

- Timpani set up splitting the 50.
Marching Bells
Marching Xylophone
Marching Marimba
Marching Vibraphone
2 sets of Timpani (2 performers, one set of four drums, one set of three drums. balanced action)
Tam-tam
(2 members)

12) Spirit of Atlanta

- Small keyboard arc with xylophone in the middle, timpani on the left.
Xylophone (concert instrument)
Vibraphone (concert instrument)
Marimba (concert instrument)
Timpani (4 balanced action drums)

(4 members)

1983

1) Garfield Cadets

- Keyboards on side 1 in a straight line, timpani in the middle, percussion on side 2.

Bells

Xylophone

Vibraphone

Marimba (4 octave)

Timpani (4 drums balanced action)

1 Percussion station (crotales, various drums and cymbals, tam-tam)

(6 members)

2) Blue Devils

- Timpani on left, keyboards in arc on the right.

Bells

Xylophone

Vibraphone

Marimba (marching instrument on stand)

Timpani (5 balanced action drums)

- 2 big sets of pitched gongs, 14 gongs in total.

(5 members)

3) Santa Clara Vanguard

- Timpani on the left, keyboards on the right in a straight line.

Bells

Xylophone

Vibraphone

Marimba (marching instrument on stand)

Timpani (5 balanced action drums)

(5 members)

- The percussion feature had every keyboard player playing a steel pan.

4) Phantom Regiment

- Timpani on the left, tam-tam and crotales in the middle. Keyboards on the right in a straight line, concert bass drums on the outside.

Bells (marching instrument on stand)

Xylophone (marching instrument on stand)

Vibraphone (marching instrument, on stand)

Marimba (marching instrument on stand)

Timpani (5 balanced action drums)

2 Concert Bass Drums

Chimes
(5 members)

5) Madison Scouts

- Keyboards in a straight line on the left, timpani on the right.

Bells

Xylophone

Vibraphone

Marimba

Timpani (4 balanced action drums)

(5 members)

6) Suncoast Sound

- Timpani and percussion on the left, keyboards on the right in straight row.

Bells

Xylophone

Vibraphone

Marimba

Timpani (4 balanced action drums)

(5 members)

7) Spirit of Atlanta

- Keyboards on the left in a line, timpani on the right.

2 Xylophones

Vibraphone

Marimba

Timpani (4 balanced action drums)

Chimes

(5 members)

8) Freelancers

- Keyboards in arc with timpani in the middle.

Bells (box bells on stand)

2 Xylophones (marching instrument on stand)

Marimba (marching instrument on stand)

Vibraphone (marching instrument on stand)

Timpani (4 balanced action drums)

Chimes

(5 members)

9) The Cavaliers

- Timpani on left, keyboards on the right.

Bells

Xylophone

Vibraphone
Marimba (4.3 octave)
Timpani (4 balanced action drums)
2 Tam-tams
Chimes
(5 members)

10) 27th Lancers

- Arc with timpani on the left, percussion station w/ chimes in middle, keyboards on the right.

Bells (marching instrument on stand)
Xylophone (marching instrument on stand)
Marimba (marching instrument on stand)
Vibraphone
4 Marching Timpani (stationary the whole show on legs)
- 4 performers played marching timpani, one drum a piece.
1 Percussion station (chimes, cymbals, and temple blocks)
(9 members, hats)

11) Bridgemen

- Percussion and timpani on the left, keyboards on the right.

Bells
Xylophone
Vibraphone
Timpani (4 balanced action drums, not used for half of the show)
Drum set (no bass drum. Did have: high hat, ride, timbales, snare drum, various other cymbals)
1 Percussion station
(6 members)

12) Sky Ryders

- Small arc, keyboards on the left, timpani on the right with the bass marimba.

Bells (marching instrument on stand)
2 Xylophones (1 concert, 1 marching instrument on stand)
Bass Marimba
Timpani (3 balanced action drums)
(4 members)

1984

- It can be assumed that any instrument is a “concert” instrument unless otherwise stated.

1) Garfield Cadets - "West Side Story"

- Keyboards on the far left in a line, then smaller tom rack, timpani, larger rack on the far right. There is a good amount of space between each "station."

Bells

3 Marching Xylophones

- Three of the keyboard players put xylophones on and start marching around.

Xylophone

Vibraphone (marching instrument on stand)

Vibraphone

Marimba (4.3 octave)

Timpani (4 balanced action drums)

Rack (concert toms, cymbals, crotales, congas)

2 Tam-tams

(7 members)

2) Blue Devils

- Percussion on far left, timpani in the middle, keyboards on the right in two rows.

Bells

Xylophone

Vibraphone (used the motor/fans)

Marimba (4.3)

Timpani (5 balanced action)

Chimes

1 Percussion station (small concert bass drum & tam-tam, toms, hand drums, cymbals, wind chimes, bell tree, triangles)

- Two sets of pitched gongs

(6 members)

3) Santa Clara Vanguard

- Timpani on the left, percussion in the middle, keyboards on the right in a straight line.

Bells

Xylophone

Marimba

Vibraphone

Timpani (5 balanced action drums)

Percussion station (2 players)

Concert BD

Tam-tam

(7 members)

4) Phantom Regiment

- Keyboards on the left in a straight line, timpani in the middle, bell plates on the right.

Bells

Xylophone
Vibraphone
Marimba
Timpani (4 balanced action drums)
Almglocken
Concert Bass Drum
Tam-tam
- Big rack of bell plates
(5 members, band hats)
- This ensemble had an unusually large amount of equipment.

5) Madison Scouts

- Keyboards in arc with the drum major podium in the middle. Timpani on the side two.
1 Marching Marimba on a stand, with bells mounted above it.
1 Marching Marimba on a stand, with a marching xylophone mounted above it.
Vibraphone
Marimba
Timpani (4 balanced action drums)
1 percussion station
(6 members)

6) Spirit of Atlanta

- Straight line, keyboards on the left, timpani on the right, percussion and a big rack of bells far right.
2 Xylophones
- one of them has a set of box bells
Marimba
Vibraphone
Timpani (4 balanced action drums)
1 Percussion station
(6 members)

7) Suncoast Sound

- Keyboards on the left in mixed arc, timpani in middle, percussion on the right.
Bells
- 1 octave of crotales in front of them.
Xylophone
2 Vibraphones
Marimba
Timpani (4 balanced action drums)
1 Percussion station
(6 members)

8) The Cavaliers

James Campbell

- Straight line, keyboards in the middle, timpani on the right, percussion on the left.

2 Bells (one has a marching xylophone mounted in front of it)

Xylophone

2 Vibraphones (one concert instrument, one marching)

Marimba

Timpani (4 balanced action drums)

Chimes

Tam-tam

- small rack of pitched gongs.

(6 members)

9) Freelancers

-Straight line, timpani and percussion on the left, keyboards on the right.

Bells

Xylophone

Vibraphone

Marimba

Timpani (5 balanced action drums)

Drum set (no bass drum or toms)

Chimes

Tam-tam

(5 members)

10) Crossmen

- Keyboards in a mixed arc, centered on the 50. Timpani outside on the right.

Bells

Xylophone

2 Vibraphones (one concert, one marching on stand)

2 Marimbas (one concert, one marching on stand)

Timpani (4 balanced)

- box bells in front of timpani

(5 members)

11) 27th Lancers

- Keyboards in slight arc on left, timpani centered on 50, percussion on the right.

Bells

Xylophone

Vibraphone

Marimba

Timpani (5 balanced)

Chimes

Tam-tam

1 Percussion station

(8 members)

12) Velvet Knights

- Keyboards in arc (with a space for the drum major podium), percussion on the left, timpani on the right.

Bells

Xylophone

Vibraphone

Marimba (4.5)

Timpani (4 balanced action drums)

Chimes

Concert BD

Tam-tam

(7 members)

1985

1) Garfield Cadets

- Keyboards on the right, in little pods so each player can play two keyboards. The timpani are in the front row with bass drums behind them, rack station on the far left. There is a big set of three drums in the middle of the pit.

Bells

Xylophone

3 Vibraphones (two concert, one marching on a stand)

2 Marimbas (4.3)

1 Marching marimba (on a stand)

Timpani (4 balanced action drums)

Rack (toms, cymbals, two wind gongs, 1 tam-tam, 1 concert bass drum chimes)

(6 members)

2) Santa Clara Vanguard

- Percussion on the left with bass drums in the back, timpani centered on the 50, then two rows of keyboards with staggered windows on the right.

Bells

Xylophone

2 Vibraphones (1 concert, 1 marching)

Marimba

Timpani (5 balanced action drums)

2 Percussion stations

Concert BD

2 Tam-tams

(8 members)

3) Blue Devils

- Percussion and timpani on the left, keyboards to the right in two rows.

2 Bells

2 Xylophones

Vibraphone

Marimba

Timpani (5 balanced action drums)

Rack

(7 members)

4) Madison Scouts

- Percussion left, timpani middle, keyboards right.

Bells

- 2 octaves of crotales around the bells

Xylophone

Vibraphone

- they used the motor/fan.

Marimba

Timpani (4 balanced action drums)

Rack

Tam-tam

(6 members)

5) Cavaliers

James Campbell

- Percussion station on far left, keyboards in a small arc in the middle (2 rows), timpani on the right.

Bells

2 Xylophones (1 concert, 1 marching)

2 Vibraphones (1 concert, 1 marching)

2 Marimbas (1 concert, 1 marching)

Timpani (4 balanced action drums)

1 Percussion station

(8 members)

6) Suncoast Sound

- Straight line, keyboards on the left, timpani in the middle, percussion on the right.

Bells

Marimba

Xylophone

Vibraphone

Timpani (4 balanced action drums)

2 Percussion stations

Concert BD
Tam-tam
(7 members)

7) Spirit of Atlanta

- Straight line, keyboards on the left, timpani in the middle, percussion on the right.

Bells
Xylophone
Vibraphone
Marimba
Timpani (4 balanced action drums)
1 Percussion station
1 Rack of small tuned bells
Concert BD
Tam-tam
(6 members)

8) Phantom Regiment

- Percussion on left, timpani in the middle, keyboards on right in line, but angled in. more percussion on far right.

Bells
Xylophone
2 Vibraphones (1 concert, 1 marching on stand)
Marimba
Timpani (4 balanced action drums)
2 Percussion stations
Concert BD
Tam-tam
(5 members)

9) Troopers

- Straight line, keyboards on left, timpani in middle, percussion on the right.

2 Bells
Xylophone
2 Vibraphones (1 concert, 1 marching)
4 Marimbas (1 concert, 3 marching)
Timpani (4 balanced action drums)
1 Percussion station
Concert BD
Tam-tam
(6 members)

10) Star of Indiana

- Percussion on the left, keyboards centered in an arc, timpani on the right.

Bells
Xylophone
Vibraphone
Marimba
Timpani (5 balanced action drums)
Drum set (standard 5 piece)
1 Percussion station
Tam-tam
(7 members)

11) Velvet Knights

- Keyboards centered in two row, timpani on the left, percussion on the right.

Bells
Xylophone
Vibraphone
Marimba
Timpani (4 balanced action drums)
Chimes
2 Percussion Stations
Concert BD
Tam-tam
(6 members)

12) Freelancers

- Keyboards in straight line, timpani and percussion in the second row.

Bells
2 Xylophones
2 Vibraphones (1 concert, 1 marching)
Marimba
Timpani (5 balanced action drums)
2 Percussion stations
Concert BD
Tam-tam
(7 members)

1986

- From this point it can be assumed that all timpani are balanced action. I will also no longer specify how many timpani are being used, unless a drum corps is using multiple sets.

1) Blue Devils

- Timpani and percussion on side 1, keyboards on side two in 2 rows (with bells, marimba, vibes in the front; xylophone, bells, and marimba in the back row).

3 Bells

Xylophone

Vibraphone

2 Marimbas

Timpani

1 Percussion station

Chimes

Concert BD

Tam-tam

(7 members)

2) Santa Clara Vanguard

- Percussion on left, timpani in middle, keyboards on the right in 2 integrated rows.

Bells

2 Xylophones (1 concert, 1 marching)

2 Vibraphone (1 concert, 1 marching)

2 Marimbas

Timpani

Percussion

2 Concert BD

2 Tam-tams

Almglocken

(9 members)

3) The Cavaliers

James Campbell

- Keyboards in the front row grouped by voice, timpani and percussion in the back row.

Bells

Xylophone

2 Vibraphones (1 concert, 1 modified marching, they took a chain and attached it where the hand bar was, so that it could be operated with the foot)

Marimba

Timpani

Concert BD

2 Tam-tams

Chimes (multiple sets)

(7 members)

4) Garfield Cadets

- Percussion and timpani on the left, keyboards on the right in two rows.

Bells

2 Xylophones (1 marching, 1 concert)
3 Vibraphones (1 marching, 2 concert)
2 Marimbas
Timpani
Concert BD
Tam-tam
(7 members)

5) Suncoast Sound

- Percussion on the left, timpani in the middle, keyboards on the right.
Bells
Xylophone
2 Vibraphones
Marimba
Timpani
1 Percussion station
Concert BD
2 Tam-tams
(7 members)

6) Spirit of Atlanta

- Keyboards on the left in two rows, timpani and percussion on the right.
Xylophone
- Box bells in front of it
2 Vibraphones
Marimba
Timpani
1 Percussion station
Chimes
Concert BD
Tam-tam
(6 members)

7) Madison Scouts

- Very spread out setup, timpani and percussion on side one. Keyboards in two rows on side two.
2 Bells
Xylophone
2 Vibraphones
- they used the motor on one of them
Marimba
Timpani
Drum set
1 Percussion station

Concert BD
Tam-tam
(9 members)

8) Star of Indiana

- Percussion on the left, keyboards centered in arc, timpani on the right.

Bells

Xylophone

Vibraphone

Marimba

Timpani

1 Percussion station

Concert BD

2 Tam-tams

(10 members)

* no marching cymbal line

9) Sky Ryders - "Highlights from Wizard of Oz"

- Timpani on the left, percussion in the middle, keyboards on the right in a straight line.

Bells

Xylophone

Marimba

Vibraphone

Timpani

1 Percussion station

Concert BD

Tam-tam

Chimes

(6 members)

10) Phantom Regiment

- Keyboards centered in two mixed rows, timpani on the left, percussion on the right.

Bells

2 Xylophones

2 Vibraphones

Marimba

Timpani

1 Percussion station

2 Concert BD

Tam-tam

Chimes

(6 members)

11) Troopers

- Keyboards on the left in two rows, timpani in the middle, percussion on the right.

Bells

3 Xylophones

Vibraphone

Marimba

Timpani

Rack

Concert BD

Tam-tam

(6 members)

12) Velvet Knights - "James Bond"

- Keyboards on the left in two rows, timpani in the middle, percussion on the right.

Bells

Xylophone

Vibraphone

Marimba

Timpani

2 Percussion stations

Concert BD

Tam-tam

(7 members)

1987

- DCI expands the "pit box" to the 35 yard lines.

1) Garfield Cadets - "Appalachian Spring"

- Keyboards centered in two rows, timpani on the right, percussion on the left.

Bells

2 Xylophones (1 concert, 1 marching)

3 Vibraphones (2 marching, 1 concert)

Marimba

Timpani

Rack

Concert BD

1 Tam-tam

Chimes

(7 members)

2) Santa Clara Vanguard

- Percussion on left, timpani in middle, keyboards on right in two rows.

Bells
2 Xylophones
2 Vibraphones
Marimba
Timpani
Rack
Concert BD
2 Tam-tams
Chimes
(8 members)

3) The Cavaliers

- Keyboards centered in one mixed row, percussion in the back row, timpani on the far left.

Bells
2 Xylophones
Vibraphone
Marimba
Timpani
Rack
Concert BD
Tam-tam
(7 members)

4) Blue Devils

- Percussion and timpani on the left, keyboards on the right in two mixed rows.

2 Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
Chimes
- rack of pitched gongs
(7 members)

5) Phantom Regiment - "Songs of the Winter Place"

- The pit is split up into two pods, each centered on the 40 yard line. 10 yards between each pod.

- side two pod had timpani, vibraphone, bells and xylo, percussion cart w/ crash cymbals, tam-tam
- side one pod has marimba, bells, concert bd, chimes, percussion cart.

2 Bells
Xylophone
Vibraphone
Marimba
Timpani
2 Percussion stations
Concert BD
Tam-tam
Chimes
(7 members)
* no marching cymbal line

6) Madison Scouts

- Straight line, keyboards on the left, timpani in the middle, percussion on the right.

Bells
Xylophone
Vibraphone
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
(9 members)

7) Star of Indiana

- Keyboards on the left in a straight line grouped into voices, timpani in the middle, percussion on the right.

2 Bells
2 Xylophones
Vibraphone
2 Marimbas
Timpani
1 Percussion station
Concert BD
Tam-tam
(10 members)
* no marching cymbal line

8) Velvet Knights - "Magical Mystery Tour"

- Percussion on left, timpani in middle, keyboards in two rows on the right.

Bells
Xylophone
2 Vibraphones
Marimba

Timpani
Rack
Concert BD
2 Tam-tams
(8 members)

9) Suncoast Sound - "My Fair Lady... Our Way!"

- Percussion on left, timpani in middle, keyboards on the right in two rows.

Bells
Xylophone
2 Vibraphones
Marimba
Timpani
Rack
Concert BD
Tam-tam
Chimes
(7 members)

10) Spirit of Atlanta

- Percussion on the left, keyboard arc in the middle, timpani on the far right

Bells
Xylophone
2 Vibraphones
Marimba
Timpani
Concert BD
Rack
(5 members)

11) Bluecoats

- Percussion on the left, timpani in the middle, keyboards on the right.

Bells
Xylophone
Vibraphone
Marimba
Timpani
Drum set (standard 5 piece)
1 Percussion station
Concert BD
(7 members)

12) Sky Ryders - "West Side Story"

- Percussion and timpani on the left, keyboards on the right. Very mixed together.

Bells
Xylophone
2 Vibraphones
Marimba
Timpani
Multiple percussion stations, and a lot of small percussion mixed into the keyboard side.
Concert BD
Tam-tam
Chimes
(8 members)
* no marching cymbal line

1988

1) Madison Scouts

- Timpani on the left, keyboards centered in mixed arc, percussion on the right.

Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
Concert BD
Tam-tam
(7 members)

2) Santa Clara Vanguard - "Phantom of the Opera"

- Timpani on the left, percussion in the center, keyboards on the right in two rows.

Bells
2 Xylophones
2 Vibraphones
Marimba
Timpani
Concert BD
Tam-tam
(7 members)

3) Blue Devils

- Percussion and timpani on the left, keyboards on the right in two rows.

2 Bells
Xylophone
2 Vibraphones
- used motors/fans
3 Marimbas

Timpani
Drum set (no bass drum)
Concert BD
Tam-tam
(7 members)

4) Garfield Cadets - "Symphony No. 3" (Copeland)

- Straight line, percussion on the left, keyboards centered and grouped by voice, timpani on the right.

2 Bells
4 Xylophones (2 concert, 2 marching)
2 Vibraphones (1 concert, 1 marching)
2 Marimbas (1-4.3, 1-4.5)
Timpani
1 Percussion station
Concert BD
4 Tam-tams
Chimes
(8 members)

5) The Cavaliers - "Firebird Suite"

- Timpani and percussion on the right, keyboards on the left in two rows.

Bells
2 Xylophones
Vibraphone
Marimba
Timpani
1 Percussion station
Concert BD
2 Tam-tams
Chimes
(8 members)

6) Phantom Regiment - "Romeo and Juliet"

- Very similar to the '87 set up, the pit is split up into two pods, each centered on the 40 yard line with 10 yards between each pod. The setups mirror each other.

- side one pod marimba, vibraphone, bells, concert bd
- side two pod has vibraphone, bells, xylophone, timpani, chimes, bd, tam, percussion cart

2 Bells
Xylophone
2 Vibraphones
Marimba
Timpani

2 Concert BD
Tam-tam
Chimes
(9 members)
* no marching cymbal line

7) Star of Indiana “Porgy and Bess”

- Keyboards in mixed row on the left, timpani and percussion on the right.

2 Bells
2 Xylophones
Vibraphone
Marimba
Timpani
1 Percussion station

Concert BD

Tam-tam

(10 members)

* no marching cymbal line

- The show starts with all of the keyboard players playing the “Porgy excerpt”

8) Velvet Knights

- Percussion on the left, timpani in the middle, keyboards on the right in two mixed rows.

Bells
Xylophone
2 Vibraphones
Marimba
Percussion
Concert BD

Tam-tam

(8 members)

9) Spirit of Atlanta - “Petrouchka”

- Keyboards centered in two mixed rows, percussion on the left, timpani on the right.

Bells
Xylophone
2 Vibraphones
Marimba
Timpani
1 Percussion station

Concert BD

Tam-tam

Chimes

(6 members)

10) Suncoast Sound - "Symphonic Dances for the Contemporary Child"

- Percussion on left, timpani in the middle, keyboards on the right in two mixed rows.

2 Bells

Xylophone

Vibraphone

Marimba

Timpani

1 Percussion station

Concert BD

Tam-tam

Chimes

(7 members)

11) Bluecoats

- Straight line, percussion on the left, timpani in the middle, keyboards on the right.

Bells

Xylophone

Vibraphone

2 marimbas (1-4.5, 1-4.3)

Timpani

2 Percussion stations

Concert BD

Tam-tam

(8 members)

12) Sky Ryders - "The Sound of Music"

- Percussion on the left, timpani in the middle, keyboards on the right in two rows.

Bells

Xylophone

2 Vibraphones

Marimba

Timpani

1 Percussion station

Concert BD

Tam-tam

Chimes

(10 members)

1989

1) Santa Clara Vanguard - "Phantom of the Opera"

- Percussion on the left, timpani in the middle, then keyboards on the right in mixed arc.

Bells

Xylophone
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
Chimes
(8 members)

2) Phantom Regiment - "New World Symphony"

- Keyboards centered in mixed arc, percussion and timpani on the right.

Xylophone
2 Vibraphones
Marimba
Timpani
Small percussion station
Concert BD
2 Tam-tams
Chimes
(7 members)
* no marching cymbal line

3) The Cavaliers

- Keyboards centered in a big integrated arc, percussion on the left, timpani on the right

Bells
2 Xylophones
Vibraphone
Marimba
Timpani
Rack
Concert BD
Tam-tam
Chimes
(7 members)

4) Blue Devils

- Percussion on the left, keyboards centered in two rows by voice, timpani on the right.

3 Bells
2 Xylophone
3 Vibraphone
 - Used the motor/fan
4 Marimbas
Timpani

Rack
Concert BD
Tam-tam
(8 members)

5) Cadets of Bergen County - "Les Miserables"

- Keyboards centered in arc grouped by voice, timpani on the left, percussion on the right.

Bells
2 Xylophones
2 Vibraphones
2 Marimbas
Timpani
Rack
2 Concert BD
5 Tam-tams
Chimes
(8 members)

6) Star of Indiana

- Keyboards on the left in mixed line, timpani and rack on the right.

2 Bells
3 Xylophones (2 concert, 1 marching)
Vibraphone
Marimba
Timpani
Rack
Concert BD
Tam-tam
Chimes
(8 members)
*no marching cymbal line

7) Madison Scouts

- Timpani on the left, keyboards centered in a mixed arc, percussion on the right.

2 Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
(12 members)

8) Bluecoats

- Timpani on the left, keyboards centered in a mixed arc, percussion on the right.

2 Bells

Xylophone

2 Vibraphones

2 Marimbas

Timpani

Rack

Concert BD

(8 members)

9) Suncoast Sound - "Florida Suite"

- Percussion on the left in two rows, keyboards centered in two rows, timpani on the right.

Bells

Xylophone

Vibraphone

Marimba

Timpani

Chimes

2 Concert BD

2 Tam-tam

Rack

(9 members)

10) Freelancers

- Percussion on the left, timpani in the middle, keyboards on the right in a straight line grouped by voice.

Bells

Xylophone

Vibraphone

Marimba

Timpani

Rack

Concert BD

Tam-tam

Chimes

(8 members)

11) Velvet Knights

- Percussion on the left, keyboards in the center in an arc, timpani on the right.

Bells

Xylophone

2 Vibraphones

Marimba
Timpani
Concert BD
Tam-tam
(9 members)

12) Crossmen

- Percussion on the left, timpani in the middle, keyboards on the right in two rows grouped by voice.

Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
2 Racks
Concert BD
Tam-tam
(8 members)

1990

1) Cadets of Bergen County “Undiscovered Bernstein”

- Timpani on the left, keyboards in the middle in one row grouped by voice, percussion on the right.

Bells
2 Xylophones
Vibraphone
2 Marimbas
Concert BD
3 Tam-tams
Chimes
(7 members)

2) The Cavaliers “The Cavalier Anthems”

- Unique experimental setup, “percussion pods.” Each instrument is surrounded by a big rack with lots of things mounted on it. This is a unique concept so far, self contained “multi-percussionist.” The pods are almost in a straight line, slightly angled in towards the center. There are a few yards between each pod, with timpani in the middle.

2 Xylophones
Vibraphone
- box bells mounted
Marimba

Timpani
Rack
Concert BD
Tam-tam
Chimes
(6 members)

3) Star of Indiana “Belshazzar’s Feast”

- Split pod setup. Each setup is between in 30-40 yard lines, once you go past the 35 yard lines the “pit” is on the field. Each pod has three rows.

Side 1 pod: vibes, xylo, tuned pipes, bd, gong, big rack, bell plates, and a few timpani (6 people)

Side 2 pod: timpani, marimba, xylophone, bells, chimes, gong, rack (5 people)

Bells
2 Xylophones
Vibraphone
Marimba
Timpani

- There is a smaller set of one or two drums on side one, and a full set of five on side two.

Concert BD
Tam-tam
Chimes
(11 members)
* no marching cymbals

4 tie) Blue Devils “Tommy”

- Percussion and timpani on the left, keyboards centered in two rows.

2 Bells
Xylophone
3 Vibraphones
5 Marimbas
Timpani
Concert BD
Tam-tam
Chimes
(8 members)

4 tie) Phantom Regiment “Dreams of Desire”

- Keyboards centered in a mixed line, timpani on the right.

Bells
Xylophone
2 Vibraphones
Marimba

Timpani
Concert BD
2 Tam-tams
Chimes
(7 members)

6) Santa Clara Vanguard

- Percussion on the left, keyboards centered in mixed arc, timpani on the right.

Bells
2 Xylophones
2 Vibraphone
2 Marimbas

- one of the marimbas had a “bass marimba attachment”

Timpani
Rack
Concert BD
Tam-tam
Chimes
(8 members)

7) Crossmen

- Percussion on the left, keyboards centered in a straight line grouped by voicing, timpani on the right.

Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
Rack
2 Concert BD
Tam-tam
(8 members)

8) Bluecoats “The Music of Duke Ellington”

-Percussion on the left, keyboards centered in an arc grouped by voice, timpani on the right.

Bells
Xylophone
- Bells and xylophone are together in one station
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD

Tam-tam
(8 members)

9) Madison Scouts

- Timpani on the left, keyboards centered in a integrated arc, percussion on the right.

2 Bells

- one set in the center of the pit, the other over on the rack

Xylophone

2 Vibraphones

2 Marimbas

Timpani

Rack

Concert BD

Tam-tam

(7 members)

10) Velvet Knights

- Percussion left, keyboards center in two rows - lots of space between keyboards like
“performance windows,” grouped by voice. Timpani far right.

Bells

Xylophone

2 Vibraphones

2 Marimbas

Timpani

Drum set

Rack

Concert BD

Tam-tam

(11 members)

11) Spirit of Atlanta

- Percussion on the left, keyboards centered in two mixed rows, timpani on the right.

2 Bells

Xylophone

2 Vibraphones

2 Marimbas

Timpani

Rack

Concert BD

2 Tam-tams

Chimes

(7 members)

12) Dutch Boy “A Tribute to Frank and Sammy”

- Percussion on the left, keyboards centered in mixed line, timpani in the back row.
Bells
Xylophone
2 Vibraphones
Marimba
Timpani
Rack
Concert BD
2 Tam-tams
(7 members)

1991

1) Star of Indiana - "Roman Images"

Thom Hannum

- Split pod setup. Each setup is between in 30-40 yard lines, once you go past the 35s the "pit" is on the field. Each pod has three rows.
 - side one pod: timpani, marimba, vibraphone, xylophone, bells, chimes, bd, rack (6 people)
 - side two pod: 2 timpani (2 drums), vibraphone, marimba, xylophone, bells, rack, bd, tam-tam

4 Marching Bells

- only used in *Pines of Rome*

2 Bells (concert)

2 Xylophones

2 Vibraphones

2 Marimbas

2 Timpani

- set of two timpani on side one, full set on side two

2 Racks

2 Concert BD

Tam-tam

Chimes

(11 members)

* no marching cymbal line

2) The Cavaliers - "The Cavalier Anthems: The Advent Collection"

- Percussion on left, timpani in middle, keyboards in two rows on the right.

Bells

2 Vibraphones

- 1 has a picc. xylo, the other has box bells

2 Marimbas

- each has a picc. xylo

Timpani
Rack
Concert BD
Tam-tam
Chimes
(7 members)
- A lot of percussion instruments mounted on each keyboard.

3) Phantom Regiment - "Phantom Voices"

- Keyboards centered in one row, timpani on the right.
2 Bells
Xylophone
2 Vibraphones
Marimba
Timpani
Concert BD
4 Tam-tams
Chimes
(8 members)

4) Santa Clara Vanguard - "Miss Saigon"

- Percussion left, keyboards center in mixed line, timpani on the right.
2 Bells
2 Xylophones
2 Vibraphones
2 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
(8 members)

5) Blue Devils - "Conversations in Jazz"

- Timpani and percussion on side 1, keyboards on side two in 2 rows group by voices w/
marimbas on the far right.
2 Bells
Xylophone
-with mounted bells
3 Vibraphones
3 Marimbas
- two w/ bells, the third has bells next to it.
Timpani
Drum set
Percussion station

Concert BD
Tam-tam
(10 members)

6) Cadets of Bergen County - "The ABCs of American Music"

- Timpani on the left, keyboards centered in mixed arc, percussion on the right.
2 Bells
2 Xylophones
Vibraphone
3 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(8 members)

7) Madison Scouts - "City of Angles"

- Percussion left, keyboards centered in mixed arc, timpani on the right.
Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
2 Tam-tams
(7 members)

8) Crossmen - "Pat Metheny Suite"

- Percussion left, timpani center, keyboards on the right in two rows grouped by voice.
2 Bells
2 Xylophones
2 Vibraphones
3 Marimbas
Timpani
Rack
Concert BD
Tam-tam
(11 members)

9) Blue Knights

- Keyboards in the center in an arc grouped by voice. Timpani are on left, percussion on right.

Bells
2 Xylophones
2 Marching Xylophones
- About five minutes into the show two performers start marching xylophones
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
Chimes
(10 members)

10) Freelancers

- Keyboards in a straight row, vibes on the outside, marimbas inside, bells and xylophone in the center. Percussion is in the back row, timpani on the far right.

Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
Concert BD
2 Tam-tams
Chimes
Percussion (throughout the back row)
(8 members)

11) Bluecoats

- Keyboards on the left, timpani in the center, percussion on the right.

Bells
Xylophone
- bells and xylophone are stacked together in one station
2 Vibraphones
2 Marimbas
Timpani
Rack (2 players)
Concert BD
2 Tam-tams
(10 members)

12) Sky Ryders - "Camelot"

- The whole pit is on side 1. Timpani on the 50, keyboards to the left in two mixed rows.

Bells
Xylophone

2 Vibraphones

3 Marimbas

Timpani

Concert BD

Tam-tam

(8 members)

- they didn't have a "rack," keyboard players covered the percussion parts.

1992

1) The Cavaliers - "Revolution!"

- Timpani in the center, racks on the outside, marimbas on side 1, vibes on side two.

2 Vibraphones

- 1 with bells, 1 with picc. xylo.

2 Marimbas

- one with bells.

Timpani

2 Racks

- side 1 rack had a xylophone

Concert BD

2 Tam-tams

Chimes

(8 members)

- they continue with the trend of each keyboard having a lot of gear near it

2) Cadets of Bergen County - "To Tame the Perilous Skies"

- Timpani in the center, woods on side one, metals on side two, both racks on the far right.

2 Bells

2 Xylophones

2 Vibraphones

2 Marimbas

Timpani

2 Racks

Concert BD

3 Tam-tams

Chimes

(8 members)

3) Star of Indiana - "American Variations"

- Again split up into two pods, with 10 yards between each. This time the entire group is in the "pit box." Each pod is in two rows, they mirror each other.

2 Bells

2 Xylophones
2 Vibraphones
2 Marimbas
2 Timpani
- set of three drums on side 1, set of four drums on side 2

Concert BD
2 Tam-tams
Chimes
Various percussion instruments everywhere
(9 members)
* no marching cymbal line

4) Blue Devils - "Big, Bad, and Blue"

- Keyboards centered in massive mixed arc (takes up 20 yards), lots of percussion stuff inside the arc, timpani far right, rack far left.

Bells
Xylophone
3 Vibraphones
3 Marimbas
Timpani
Rack
Concert BD
Tam-tam
Percussion stations (inside arc, several instruments)
- Rack of tuned gongs
(10 members)

5) Madison Scouts - "City of Angles"

- Split pod setup. Almost 20 yards between each.
- side 1: chimes, bells, xylo, vibes, marimba, bd, tam
- side 2: timpani, marimba, vibes, rack

Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
(8 members)

6) Crossmen - "Songs for the Planet Earth"

- Keyboards in the front row, grouped by voice. Timpani in the back row on the left, percussion in the back row on the right.

Bells
2 Vibes
Xylophone
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
(8 members)

7) Santa Clara Vanguard - "Fiddler on the Roof"

- Split pod setup. About 10 yards of space between each. Each pod is on a riser. They eventually move the pods to form a straight line.
- side 1 pod: marimba, xylo, rack with bd and tam-tam.
- side 2 pod: marimba, xylo, timp, small rack of cymbals and bell plates, bells.

Bells
2 Xylophones
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
Chimes
(8 members)

8) Phantom Regiment - "War and Peace"

- Keyboards centered in a line, grouped by voice. Timpani on the left.

Bells
Xylophone
2 Vibraphones
Marimba
Timpani
Chimes
2 Concert BD
- 1 normal concert bd, 1 huge bd for the *1812 Overture*
5 Tam-tams
Percussion instruments everywhere
(7 members)

9) Blue Knights - "Portraits of Aaron Copland"

- Timpani on the left, keyboards in the center in 2 rows grouped by voice, percussion on the right.
2 Xylophones

3 Vibraphones
3 Marimbas
Timpani
Rack
Concert BD
Tam-tam
(12 members)

10) Velvet Knights - "Magical Mystery Tour"

- Timpani back center, keyboards around that in two rows, marimbas on the right, vibes split on both sides. Percussion on the right, drum set on the left.

Bells
Xylophone
3 Vibraphones
3 Marimbas
Timpani
2 Racks
Drum set
Concert BD
Tam-tam
- Rack of tuned gongs
(12 members)

11) Bluecoats - "A Day in the Life"

- Timpani centered, percussion on side two, keyboards in arc on side 1.

Bells
Xylophone
- the xylophone and bells are apart of one station.
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
(9 members)

12) Freelancers - "Symphony No.1"

- Keyboards in the front row, percussion in the back row, timpani on the right

2 Bells
Xylophone
Vibraphone
2 Marimbas
Timpani
Rack

Concert BD
2 Tam-tams
Chimes
(8 members)

1993

1) Cadets of Bergen County - "In the spring... at the time when kings go off to war"

- Keyboards centered in two rows, grouped into voices, timpani and percussion far right.

Bells

2 Xylophones

2 Vibraphones (1- 3 octave, 1- 4 octave)

3 Marimbas

Timpani

Chimes

Rack

Concert BD

3 Tam-tams

(9 members)

* no marching cymbal line

2) Star of Indiana

- The setup is totally symmetrical. one big row w/ marimbas in the center, timpani on the outside. Racks are in the back.

4 Bells

2 Xylophones

- The bells and xylophones were each paired into one glock/xylo station, then there are two sets of bells in the back row towards the middle

2 Vibraphones

4 Marimbas

2 Timpani (two full sets of four drums)

2 Racks

2 Concert BD

4 Tam-tams

Chimes

(14 members)

* no marching cymbals

3) Phantom Regiment - "The Modern Imagination"

- The pit is on the field. side one 35, between the numbers and the front hash. They stood on a tarp in front of a big stage, it looked like an indoor drumline setup.

Keyboards on the left in two rows, timpani on the right sitting on a riser

Bells

2 Xylophones
2 Vibraphones
2 Marimbas
Timpani
Chimes
Concert BD
2 Tam-tams
(8 members)
* no marching cymbals

4) Blue Devils - "A Don Ellis Portrait"

- Keyboards centered in two rows - totally mixed with marimbas in the back, racks on the outsides, timpani to the right.

2 Bells
- one set of bells is on the side 2 rack

2 Xylophones
3 Vibraphones
3 Marimbas
Timpani
2 Racks
2 Concert BD
2 Tam-tams
(7 members)

5) The Cavaliers - "Heros - A Symphonic Trilogy"

- Keyboards in large mixed arc with timpani in the middle.

Bells
Xylophone
3 Vibraphones
3 Marimbas
- one of the marimbas has a picc. xylo, another has box bells

Timpani
Concert BD
3 Tam-tams
Chimes
- Rack of tuned gongs
(9 members)
* no marching cymbal line

6) Madison Scouts - "Reflection and Evolution"

- Split pod setup. Ten yards between each pod. Timpani and percussion on side two, keyboards on side one.

Bells
Xylophone

2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
Chimes
(8 members)

7) Santa Clara Vanguard - "A Walton Trilogy"

- Keyboards centered in mixed arc, timpani on the right, percussion on the left.

2 Bells

2 Xylophones

2 Vibraphones

2 Marimbas

Timpani

2 sets of chimes

- Massive set of hand bells

- the hand bells were played by people who were not in the front ensemble.

(9 members)

8) Crossmen - "Songs for Planet Earth Part II - A Celebration of Humanity"

- Keyboards centered in a straight line grouped by voice, timpani back left, percussion back right.

Bells

Xylophone

2 Vibraphones

2 Marimbas

Timpani

Rack

Concert BD

Tam-tam

(8 members)

9) Bluecoats - "Standards in Blue: A Tribute to Dizzy Gillespie"

- Keyboards left in arc grouped by voice, timpani centered, percussion on the right.

Bells

Xylophone

- Bells/xylo as one station

2 Vibraphones

2 Marimbas

Timpani

Drum set

Rack

Concert BD
(9 members)

10) Blue Knights - "The Next Generation - Musical Selections from Star Trek"

- Keyboards centered in two mixed rows, rack on the left, timpani on the right

Bells

2 Xylophones

2 Vibes

3 Marimbas

Timpani

Drum set

Concert BD

Tam-tam

Chimes

(11 members)

11) Glassmen - "A Voyage Through Imagination"

- Keyboards centered in a mixed arc, timpani on the right, percussion on the left

Bells

Xylophone

3 Vibraphones

2 Marimbas

Timpani

Rack

Concert BD

3 Tam-tams

(9 members)

* no marching cymbal line

12) Colts - "Iowa's Four Seasons"

- Keyboards on the left in two mixed rows, timpani on the right. Racks on the outsides.

2 Bells

2 Xylophones

2 Vibraphones

Marimba

Timpani

2 Rack

Concert BD

Tam-tam

(11 members)

1994

1) Blue Devils - "My Spanish Heart"

- Keyboards on side one in two mixed rows, small rack on the far right. Timpani on side two, more racks far left.

2 Bells

Xylophone

3 Vibraphones

3 Marimbas

Timpani

Chimes

3 Racks

3 Concert BD

Tam-tam

(8 members)

2) Cadets of Bergen County - "West Side Story"

- Timpani centered, keyboards on the left in one row grouped by voice, rack on the right.

* They have 7 drum sets to the right of the pit.

2 Bells

Xylophone

2 Vibraphones (one had a low c)

2 Marimbas

Timpani

Rack

2 Concert BD

1 Large tam-tam, numerous smaller tam-tams (3 or 4)

7 Drum sets

- each had a kick, snare, rack tom, floor tom, hh, ride.

(9 members)

* no marching cymbals

3) Phantom Regiment - "Songs for a Summer Night"

- Similar setup to the year before, on the field. The "pit" was on side one, centered on the 30 yard line, right on the numbers. They were in front of a small curtain. Setup in two rows, marimba and timpani in the front (timp on right), vibes, xylo, bells in the back, chimes up on a riser on the far right.

- Two more percussion pods on the field, drums and cymbals played by the drum line.

2 Xylophones

- each with a set of bells

2 Vibraphones

3 Marimbas

Timpani

Concert BD

2 Tam-tams

Chimes

(this does not include info about the other two percussion pods on the field)

(9 members)

4) The Cavaliers - "Rituals"

- Timpani on the left, keyboards centered in two rows (w/ windows), vibes on left
marimbas on right, percussion on the far right

3 Vibraphones

3 Marimbas

- They have bells and xylophones mounted on the marimbas and vibes.

Timpani

Rack

Concert BD

2 Tam-tams

(8 members)

* no marching cymbals

5) Santa Clara Vanguard - "The Red Poppy"

- Keyboards, percussion, and timpani intermixed in two rows.

Bells

Xylophone

2 Vibraphones

2 Marimbas

Timpani

Chimes

Rack

3 Concert BD

2 large tam-tams (several smaller ones)

(8 members)

6) Madison Scouts

- Keyboards centered in a mixed arc. Rack to the left, timpani on the right

Bells

Xylophone

2 Vibraphones

2 Marimbas

Timpani

Rack

Concert BD

Rack of large and small tam-tams and gongs

Chimes

(9 members)

7 tie) Blue Knights - "Trittico"

- Keyboards centered in mixed arc, timpani left, rack right.

Bells

Xylophone

4 Vibraphones

3 Marimbas

Timpani

Rack

Chimes

(14 members)

* no marching cymbal line

7 tie) Crossmen - "Suite Children"

- Rack and drum set on side two, keyboards centered in two rows grouped by voice, timpani far right.

Bells

Xylophone

2 Vibraphone

3 Marimba

Timpani

Rack

Concert BD

Tam-tam

(11 members)

9) Bluecoats - "Blues"

- Keyboards on side in arc grouped by voice, drum set centered, rack on the right.

Bells

Xylophone

- bells and xylophone in the center of arc as one station.

2 Vibraphones

2 Marimbas

Drum set

Rack

Concert BD

Tam-tam

(9 members)

* no timpani - first group in DCI finals to not have timpani on the field

10) Glassmen - "Days of Future Past"

- Timpani on the left, keyboards on the right in two rows grouped by voice.

Bells

Xylophone

3 Vibraphones
2 Marimbas
Timpani
Concert BD
Tam-tam
Chimes
(9 members)

11) Magic of Orlando - "Cirque du Magique, Part Deux"

- Percussion and timpani on the left, keyboards on the right in two mixed rows.

2 Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
2 Marching Timpani
Rack
Concert BD
2 Tam-tams
Chimes
(14 members)

12) Colts - "Relations and Romance"

- Rack on the left, keyboards centered in a mixed arc, timpani on the right.

Bells
2 Xylophones
3 Vibraphones
1 Marimba
Timpani
Rack
Concert BD
Tam-tam
Chimes
(10 members)

1995

1) The Cavaliers - "The Planets"

(*Erik Johnson* was a front ensemble consultant)

- Timpani on the left, keyboards centered in two rows (w/ windows), vibes on right
marimbas on left. percussion on the far right

3 Vibraphones
3 Marimbas

- Bells, xylophones, and crotales mounted on the marimbas and vibes.

Timpani

Rack

2 Concert BD

2 Tam-tams

(8 members)

* no marching cymbals

2) Cadets of Bergen County - "An American Quintet"

- Rack on far left, timpani in the center, keyboards in mixed line on the right. Drum set to the right of the keyboards. The pit fits between the side two 30 and the side one 45 yard lines.

Bells

2 Xylophones

2 Vibraphones

3 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

7 Drum sets

(10 members)

* no marching cymbals

- Seven performers play drum set for a small portion of the show.

3) Blue Devils - "Carpe Noctem"

- Keyboards on side 1 in two mixed rows, timpani and rack on side 2. Rack of various metallic instruments on far left.

Bells

Xylophone

3 Vibraphone

2 Marimba

Timpani

Rack

3 Concert BD

3 Tam-tams

Chimes

(10 members)

* no marching cymbal line

4) Madison Scouts - "A Drums Corps Fan's Dream"

- Percussion left, timpani right. Keyboards centered in a arc, with vibes and xylo in the center.

Bells
2 Xylophones
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
2 Tam-tams
(10 members)

5) Phantom Regiment - “Adventures Under a Darkened Sky”

- Keyboards centered in a straight line, grouped by voice. Timpani to the right.

Bells

Xylophone

- Bells and xylophone are together in one station

2 Vibraphones

3 Marimbas

Timpani

Concert BD

2 Tam-tams

Chimes

(8 members)

* no cymbal line

6) Santa Clara Vanguard - “Not the Nutcracker”

- Keyboards up front in a mixed line, timpani back center, rack back left

Bells

Xylophone

2 Vibraphones

2 Marimbas

Timpani

Rack

Concert BD

Tam-tam

Chimes

(8 members)

7) Bluecoats - “Homefront”

- Keyboards on side in arc grouped by voice, drum set centered, rack on the right.

Bells

Xylophone

- Bells and xylophone together in one station.

2 Vibraphones

2 Marimbas

Drum set
Rack
2 Concert BD
Tam-tam
(9 members)
* no timpani

8) Glassmen - "A Joyful Celebration"

- Tam-tams and rack of metallics on both outsides. Timpani on the right, rack on the left.
Keyboards centered in arc grouped into choirs, with drums between each keyboard.

Bells
Xylophone
3 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
3 Tam-tam
Chimes

- Rack of bell plates and other metallic sounds on each side of the pit
(9 members)

9) Colts - "Sunday Afternoon in the Park with George"

- Rack on the left, keyboards centered in two mixed rows, timpani on the right.

Bells
Xylophone
3 Vibraphones
Marimba
Timpani
Rack
2 Concert BD
2 Tam-tam

- rack of small tuned gongs
(12 members)

10) Crossmen

- Timpani on the left, rack on the right. Keyboards centered in a line grouped by voice.

Bells
2 Xylophones
2 Vibraphones
2 Marimbas
Timpani
2 Racks

Chimes
2 Concert BD
2 Tam-tam
(8 members)

11) Carolina Crown - "Stormworks"

- Keyboards centered in a straight line grouped by voice. Timpani on the right, rack on the left.

Bells
2 Xylophones
2 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tam
Chimes
(12 members)

- The show starts with 5 thunder sheets, bass drums, and break drums to create a sound scape that is supposed to emulate a thunder storm. This is something that would be sample electronically today.

12) Magic of Orlando - "Danse Animale"

- Timpani in the center. Keyboards on side two in a straight line, rack on the far right

Bells
Xylophone
Vibraphone
Marimba
Timpani
Rack
2 Concert BD
(9 members)

1996

1 tie) Blue Devils - "Club Blue - a gangster chronicle"

- Rack on the left, keyboards in two rows ending at the 50, then timpani and another rack on the right.

Bells
Xylophone
3 Vibraphone
3 Marimba
Timpani

2 Rack
3 Concert BD
2 Tam-tam
(8 members)
* no marching cymbal line

1 tie) Phantom Regiment

- Percussion on the left, timpani on the right, keyboards centered in two mixed rows.

Xylophone
3 Vibraphones
3 Marimbas (all 4.3)
2 sets of timpani (2 balanced action & 5 balanced action)
2 Concert BD
2 Tam-tams
Chimes
1 Percussion station
(8 members)
* no marching cymbal line

3) Cadets of Bergen County - "The American West"

- Rack and timpani on far left, keyboards in a straight line grouped by voice, another set of timpani in a straight line on the far right.

Bells
2 Xylophone
3 Vibraphone
3 Marimba
2 full sets of timpani
2 Rack
3 Concert BD
4 Tam-tam
Chimes
(10 members)

4) The Cavaliers - "Pan American Sketches"

- Timpani on the left, keyboards centered in two rows (w/ windows), vibes on right marimbas on left, percussion on the right.

3 Vibraphones
3 Marimbas
- Bells, xylophones, and crotales mounted on the marimbas and vibes.

Timpani
Rack
2 Concert BD
2 Tam-tams
(8 members)

* no marching cymbals

5) Santa Clara Vanguard - "La Mer"

- Straight line with timpani in the center, keyboards in to either side, somewhat grouped by voice, rack on the left.

2 Bells (one is on the rack)

2 Xylophones

2 Vibraphones

2 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(9 members)

6) Madison Scouts - "A drum corps fans dream: part dos"

- Percussion left, keyboards centered in two mixed rows, timpani to the right.

Bells

2 Xylophones

2 Vibraphones

2 Marimbas

Timpani

Rack

1 Concert BD

2 Tam-tams

(10 members)

7) Bluecoats - "American Celebrations"

- Straight line with keyboards on the left, timpani in the center, percussion on the right

Bells

Xylophone

- bells and xylophone are together as one station

2 Vibraphones

2 Marimbas

Timpani

Rack

Concert BD

Tam-tam

(9 members)

* no marching cymbal line

8) Crossmen - "The Voices of Jazz"

- Keyboards mixed in the front row, timpani centered in the back w/ drum set, percussion fills up the rest of the back row

Bells
2 Xylophones
2 Vibraphones
3 Marimbas
Timpani
Rack
Drum Set
2 Concert BD
2 Tam-tams
Chimes
(11 members)

9) Magic of Orlando - "Twelve Seconds to the Moon"

- Keyboards centered in a big integrated arc, timpani on the right., racks on the outsides.

Bells
2 Xylophones
3 Vibraphones
2 Marimbas
Timpani
2 Rack
3 Concert BD
Tam-tam
Chimes
(13 members)

10) Carolina Crown - "Chess... and the art of strategy"

- Keyboards centered in mixed arc, timpani to the left, racks on the outside.

3 Bells
2 Xylophones
2 Vibraphones
2 Marimba
Timpani
Rack
1 Concert BD
1 Tam-tam
Chimes
(10 members)

* no marching cymbals

11) Colts - "Magnificat"

- Keyboards front and center, timpani centered in a second row with racks on the outside.

2 Bells

2 Xylophones
2 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(14 members)

12) Blue Knights - "The Music of Ron Nelson"

- Timpani in the center, keyboards in two rows on either side.

Bells
2 Xylophones
2 Vibraphones
3 Marimbas
Timpani
Rack
1 Concert BD
1 Tam-tams
Chimes
(12 members)

1997

1) Blue Devils - "As Time Goes By"

- Timpani in the center, keyboards on the left in two mixed rows, percussion on the right.

Bells
2 Xylophones
3 Vibraphones
3 Marimbas
Timpani
Rack
3 Concert BD
Tam-tams
4 "cocktail" Drum sets
(11 members)
*no marching cymbals

2) Cadets of Bergen County - "Celebration"

- Timpani on the right and left of the back row, keyboards in a straight line grouped by voice, rack on the back row.

Bells

Xylophone
3 Vibraphones
3 Marimbas
2 sets of timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(10 members)
* no marching cymbals

3) Santa Clara Vanguard - "Fog Town Sketches"

- Keyboards centered in a straight line, timpani on the left, racks in the back.

Bells
2 Xylophones
2 Vibraphones
3 Marimba
Timpani
2 Rack
2 Concert BD
2 Tam-tams
Chimes
(9 members)

4) Phantom Regiment - "The Ring"

- Racks on the left, timpani on the right, keyboards centered in two mixed rows.

Bells
Xylophone
3 Vibraphones
3 Marimbas
2 Timpani

- Full set on the right, two extra drums on the left side of the front row

Rack
2 Concert BD
Tam-tam
(8 members)

5) Madison Scouts - "The Pirates of Lake Mendota"

- Percussion on the left, keyboards centered in two mixed rows, timpani on the right.

Bells
2 Xylophones
2 Vibraphones
2 Marimbas
Timpani

Rack
1 Concert BD
3 Tam-tams
(9 members)

6) Crossmen - "The Colors of Jazz"

- Keyboards in the front row grouped by voice, timpani centered in the back row.
2 Bells
2 Xylophones
3 Vibraphones
2 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tam
Chimes
(11 members)

7) The Cavaliers - "Firebird"

- Keyboards centered in two mixed rows with performance windows, timpani centered in the back.
3 Vibraphones
4 Marimbas
- Bells, xylophones, and crotales mounted on the marimbas and vibes.
Timpani
4 Concert BD
2 Tam-tam
(8 members)
* no marching cymbals

8) Glassmen - "The Age of Gold: the magic of Georges Bizet"

- Keyboards centered in 2 mixed rows, rack and timpani on the left.
Xylophone
3 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD
Tam-tam
Chimes
(8 members)

9) Blue Knights - "Selections from Ben Hur"

- Keyboards centered in two rows grouped by voice, timpani on the right, rack on the left.

Bells
2 Xylophones
2 Vibraphones
3 Marimbas
Timpani
Rack
Concert BD
Tam-tam
Chimes
(10 members)

10) Magic of Orlando - "Carnivale: Celebrations for sinner and saint"

- Timpani and percussion on the left, keyboards in two mixed rows on the right.

Bells
Xylophone
3 Vibraphones
2 Marimbas
Timpani
Rack
Drum set
Concert BD
Tam-tam
Chimes
(11 members)

11) Bluecoats - "Midnight Blue... Jazz after Dark"

- Keyboards in front row (with almost five yards between each), timpani and rack in the back row.

Bells
Xylophone
- Bells/xylo were together in one station.
2 Vibraphones
2 Marimbas
Timpani
Drum set
Rack
Concert BD
Tam-tam
Chimes
(9 members)

12) Carolina Crown - "Postcards from Britain"

- Keyboards centered in one big mixed arc, timpani on the right, rack on the left.
Bells

2 Xylophones
2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
Tam-tam
2 sets of Chimes
(9 members)
* no marching cymbals

1998

1) Cadets of Bergen County - "Stonehenge"

- Keyboards in the front row, group by voice. There is a set of timpani centered in the back row and a set of timpani in the back on the far left. There is a rack on the back row to the right of the timpani and another in the front row on the left.

Bells
Xylophone
3 Vibraphones
3 Marimbas
2 Timpani (2 full sets)
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(10 Members)
*no marching cymbals

2) Santa Clara Vanguard - "Copland: The Modernist"

- keyboards in one mixed row, rack back left with timpani in the front left.

Bells
2 Xylophones
2 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(8 Members)

3) Blue Devils - "One Hand, One Heart"

- The whole pit was setup on side one. Keyboards on the right in two tightly mixed rows, timpani and rack on the far left.

Bells

Xylophone

3 Vibraphones

2 Marimbas

Timpani

Rack

3 Concert BD

2 Tam-tam

Chimes

(8 Members)

* no marching cymbals

4) The Cavaliers - "Traditions for a New Era"

Erik Johnson takes over as front ensemble arranger.

- Timpani centered, keyboards in two mixed rows with "performance windows."

4 Vibraphones

4 Marimbas

- Xylophones, bells, and crotales mounted on the vibes and marimbas.

Timpani

4 Concert BD

2 Tam-tams

(9 Members)

*no marching cymbal line

5) Glassmen - "Dreams of Gold: The Music of Alexander Borodin"

- Keyboards centered in two mixed rows, timpani on the left, rack on the right.

2 Bells

- one set by the back row vibes, the other up front near a marimba

Xylophone

3 Vibraphones

3 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(8 Members)

6) Madison Scouts - "Power, Pizzazz and All That Jazz"

- Rack left, keyboards centered in two mixed rows, timpani on the right

Bells

2 Xylophones

2 Vibraphones
2 Marimbas
Timpani
Rack
Concert BD
2 Tam-tam
(10 Members)

7) Crossmen - "A Metheny Portrait"

- Keyboards in the front row grouped by voice. Timpani centered in the back row, rack on the left in the back row.

Bells
Xylophone
3 Vibraphones
4 Marimbas
Timpani
Rack
Concert BD
Tam-tam
Chimes
(11 Members)

8) Phantom Regiment - "Songs from the Eternal City"

- Keyboards in two rows grouped by voice, with timpani centered in the back row.

Xylophone
3 Vibraphones
4 Marimbas
- Bells mounted on one of the marimbas
Timpani
2 Concert BD
2 Tam-tam
(9 Members)
* no marching cymbal line

9) Blue Knights - "Masters of the Symphony"

- Keyboards centered in two mixed rows, drum set in the middle of the back row, timpani on the far left.

2 Bells
2 Xylophones
3 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD

3 Tam-tam
Chimes
(13 Members)

10) Bluecoats - "The Four Seasons of Jazz"

- Keyboards in a straight row, grouped by voice. Timpani back left, drum set back center, rack back right.

2 Bells
Xylophone
3 Vibraphones
3 Marimbas
Timpani
Drum set
2 Concert BD
2 Tam-tam
Chimes
(12 Members)
* no marching cymbals

11) Carolina Crown - "Heroes... then and now"

- Rack left, keyboards centered in one row by voice, timpani on the far right. There is a smaller rack on the far right.

Bells
Xylophone
2 Vibraphones
2 Marimbas
Timpani
Rack
3 Concert BD
2 Tam-tam
Chimes
(10 Members)

12) Colts - "An a Cappella Celebration"

- Mixed keyboard arc in the center, timpani to the left, rack on the right, much smaller percussion station behind the keyboard on the far left.

Bells
Xylophone
3 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tam

Chimes
(12 Members)

1999

1 tie) Blue Devils - "Rhythms...at the edge of time"

- Timpani centered, racks on the right, keyboards on the left in two mixed rows.

Bells

3 Vibraphones

3 Marimbas

- Xylophone mounted on one of the marimbas

Timpani

2 Rack

3 Concert BD

2 Tam-tams

Chimes

(9 Members)

*no marching cymbal line

1 tie) Santa Clara Vanguard - "Inventions for a New Millennium"

- Keyboards centered in mixed arc, timpani on the left, rack on the right.

Bells

Xylophone

3 Vibraphones

3 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(9 Members)

3) The Cavaliers - "Classical Innovations"

Erik Johnson

- Timpani centered in the back. Keyboards in two rows with "windows." Vibes on the outside marimbas on the inside.

4 Vibraphones

4 Marimbas

- Bells, xylophones, chime notes, and crotales mounted on the vibraphones and marimbas

Timpani

4 Concert BD

2 Tam-tams

(9 Members)

* no marching cymbals

4) The Cadets

- Keyboards mixed in the front row, both sets of timpani in the back row splitting the 50, rack on the far left in the front row.

Bells

Xylophone

3 Vibraphones

4 Marimbas (3-4.3 1-4.6)

2 Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(10 Members)

* no marching cymbals

5) Glassmen - "Empire of Gold: the music of Zoltan Kodaly"

- Split pod setup (each between the 35 and 40) with three keyboards in a straight line on the 50. The whole pit was almost connected, just a few yards between the line and the pods for people to sneak through.

-side 1 pod: timpani, chimes, bong, 2 vibes, crotales

-side 2 pod: 2 marimbas, rack, bong, rack, bd,

- center in line: vibe, marimba, xylophone

Xylophone

3 Vibraphones

- one has mounted bells

3 Marimbas

Timpani

Rack

3 Concert BD

Tam-tams

Chimes

(8 Members)

- performers came up to the front and played solos, did a small amount of drill in between the pods and the keyboards in a line. Crossmen would do something similar 16 years later.

6) Madison Scouts - "Jesus Christ Superstar"

- Percussion on the left, keyboards centered in two mixed rows, timpani to the right.

Bells

Xylophone

3 Vibraphones

3 Marimbas
Timpani
Rack
Concert BD
2 Tam-tams
1 Cocktail drum set
(10 Members)

7) Blue Knights - "Suite for Brass and Percussion"

- Timpani far left, rack far right, keyboards centered in one mixed row.

Bells
2 Xylophones
3 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(13 Members)
* no marching cymbals

8) Phantom Regiment - "Tragedy and Triumph: Music of Peter Illyich Tchaikovsky"

- Timpani centered in the back. Keyboards on either side in two mixed rows w/
"performance windows."

3 Vibraphones
4 Marimbas
- Marimbas had bells and crotales mounted on them
Timpani
2 Concert BD
1 Tam-tam
(8 Members)
* no marching cymbal line

9) Boston Crusaders - "A Collection of Symphonic Dances"

- Keyboards in the front in a mixed line. Timpani centered in the back with the rack on
the right.

2 Bells
2 Xylophones
3 Vibraphones
4 Marimbas
Timpani
Rack
3 Concert BD

2 Tam-tams
chimes
(12 Members)
* no marching cymbal line

10) Crossmen - "Changing Perspectives: a silver celebration"

- Keyboards in the front row by voice, timpani centered in the back row, rack on the far right.

Xylophone
3 Vibraphones
4 Marimbas
Timpani
Rack
2 Concert BD
3 Tam-tams
(10 Members)

11) Carolina Crown - "The Music of Jekyll and Hyde"

- Percussion on the left, timpani on the right, keyboards centered in two mixed rows.

2 Bells
Xylophone
3 Vibraphones
4 Marimbas
Timpani
Rack
3 Concert BD
3 Tam-tams
Chimes
2 racks of tuned gongs
(13 Members)

12) Colts - "Voices"

- Keyboards centered in mixed arc, timpani on the left, rack on the right.

2 Bells
Xylophone
4 Vibraphones
4 Marimbas
Timpani
Rack
3 Concert BD
2 Tam-tams
Chimes
(15 Members)

2000

1) The Cadets - "We Are the Future: Walt Disney World's Millennium Celebration"

- Timpani centered in the back, rack back left, keyboards in the front row in a mixed line.

Bells

Xylophone

3 Vibraphones

4 Marimbas (2-4.3 2-4.6)

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(9 Members)

* no marching cymbal line

2) The Cavaliers - "Niagara Falls"

Erik Johnson

* The first "standard" Cavaliers pit setup. 4 marimbas in the front center, vibes on the outside of the front row w/ two more vibes outside and behind. Symmetrical setup except for the timpani on the far left.

4 Vibraphones

4 Marimbas

-Xylophone and bells mounted on marimbas and vibes

Timpani

2 Concert BD

2 Tam-tams

Chimes

(9 Members)

*no marching cymbal line

3) Blue Devils - "Methods of Madness: Cinematic Music of Bernard Herrmann"

- Racks on the left, timpani in the center, keyboards on the right in two rows with "performance windows."

Bells

Xylophone

- Bells and xylo as part of one station,

3 Vibraphones

3 Marimbas

- they have bells mounted on them

Timpani

2 Rack

2 Concert BD

2 Tam-tams

Chimes
(9 Members)
*no marching cymbal line

4) Santa Clara Vanguard - "Age of Reverence"

- Timpani left, rack right, keyboards centered in one big mixed arc.

2 Bells
Xylophone
3 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD
3 Tam-tams
Chimes
(8 Members)

5) Boston Crusaders - "Red"

- Racks on the outside, keyboards centered in two rows grouped by voice, timpani on the right.

Bells
2 Xylophone
- Bells mounted on one of the xylophones
3 Vibraphones
4 Marimbas
Timpani
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(12 Members)

6) Blue Knights - "The Colors of Brass and Percussion"

- Keyboards in two rows w/ "performance windows" grouped by voice. Timpani on the far right.

Bells
Xylophone
4 Vibraphones
4 Marimbas
Timpani
2 Concert BD
2 Tam-tams
(10 Members)

7) Phantom Regiment - "Masters of Mystique - the Dawn of Modern Music"

- Keyboards centered in two mixed rows, timpani in the center of the back row.

3 Vibraphones

4 Marimbas

-bells and xylophones were mounted on the marimbas and vibes

Timpani

4 Concert BD

2 Tam-tams

- 3 single chime bars next to the timpani

(8 Members)

8) Glassmen - "Music of George Gershwin"

- Keyboards centered in mixed arc, timpani left, rack right.

Xylophone

- bells mounted on the xylophones

3 Vibraphones

3 Marimbas

Timpani

Rack

3 Concert BD

Tam-tam

(9 Members)

9) Crossmen - "Clubbin' with the Crossmen"

- Rack and timpani in the back row. Keyboards in the front row grouped by voice.

Bells

Xylophone

3 Vibraphones

3 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(10 Members)

10) Madison Scouts - "The Cossack Brotherhood"

- The whole pit is on side two, half on the field half off the field. Timpani are on the left, rack on the right. The keyboards are in two mixed rows, but with a lot space between each for people to pass through.

Bells

Xylophone

2 Vibraphones

2 Marimbas

Timpani
Rack
2 Concert BD
2 Tam-tams
(11 Members)

11) Carolina Crown - "Zorro's theme, Diego's goodbye, Stealing the map"

- The whole pit is on side two, in front of a big black curtain. Keyboards in two mixed rows with timpani in the center of the back row, rack back left.

Bells
Xylophone
- Bells and xylophone together in one station
3 Vibraphones
4 Marimbas
Timpani
Rack
3 Concert BD
Tam-tams
(10 Members)

12) Bluecoats - "Threshold"

Jim Weaver is the front ensemble arranger

- Keyboards centered in one mixed row, timpani and rack on the far right.

Bells
Xylophone
- Bells and xylophone together in one station
3 Vibraphones
4 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(12 Members)

2001

1) The Cavaliers - "Four Corners"

Erik Johnson

- 4 marimbas in the front center, vibes on the outside of the front row w/ two more vibes outside and behind. Symmetrical setup except for the timpani on the far right.

4 Vibraphones
- bells mounted on vibes and marimbas

4 Marimbas (4.3)

-xylophone mounted between center marimbas

Timpani

2 Concert BD

2 Tam-tams

Chimes

(9 Members)

* no marching cymbals

2tie) Blue Devils - "Awayday Blues"

- Rack and timpani on the far right, keyboards are in two mixed rows with "performance windows."

Bells

Xylophone

- Bells and xylophone together in one station

3 Vibraphones

3 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

(9 Members)

* no marching cymbals

2tie) The Cadets - "Juxtapformance"

- Three rows, drum set, rack, and timpani in the back row. Marimbas in the front row, vibes, bells, and xylophone in the middle row.

Bells

Xylophone

3 Vibraphones

4 Marimbas

Timpani

Rack

6 drum sets

- 1 in the pit

- 5 on side two

2 Concert BD

Tam-tam

(11 Members)

* no marching cymbal line

- The tenor line all played drum set.

4) Santa Clara Vanguard - "New Era Metropolis"

- Timpani left, rack right, keyboards centered in one big mixed arc.

Bells
Xylophone
3 Vibraphones
4 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(10 Members)

5) Glassmen - "IMAGO"

Colin McNutt

- Keyboards centered in mixed arc, with timpani in the middle. The racks are in the back row.

Bells
Xylophone
- Bells and xylo in one station.
3 Vibraphones
3 Marimbas (2-4.3 1-4.6)
2 Timpani (1 full set, and a pair on side two)
2 Rack
4 Concert BD
4 Tam-tams
Chimes
(10 Members)

6) Phantom Regiment - "Virtuoso"

- Timpani on the left, keyboards on the right in two rows. Marimbas in the front, vibes in the back.

4 Vibraphones
4 Marimbas (2-5, 2-4.6)
- Bells and xylophones are mounted on the marimbas and vibes.
Timpani
Rack
2 Concert BD
Tam-tam
(9 Members)
* no marching cymbals

7) Crossmen - "Late night jazz"

- Timpani on the left, rack back right, keyboards centered in two mixed rows with "performance windows."

Bells

Xylophone
3 Vibraphones
4 Marimbas (2-4.5, 2-4.3)
Timpani
Rack
2 Concert BD
2 Tam-tams
(10 Members)

8) Bluecoats - "Latin Sketches"

EJ and Tom Rarick join the Bluecoats staff as consultants. *Jim Weaver* was the arranger.

- Keyboards centered in mixed arc, timpani on the left, rack on the right.

3 Vibraphones
3 Marimbas

- bells and xylophone were mounted on the marimbas and vibraphones

Timpani
Rack
2 Concert BD
2 Tam-tams
(9 Members)

9) Boston Crusaders - "Harmonium"

- Keyboards centered in two mixed rows, timpani on the right, rack on far right.

2 Bells
2 Xylophone

- bells mounted on each xylophones

3 Vibraphones
4 Marimbas

Timpani
2 Racks
2 Concert BD
2 Tam-tams

Chimes
(11 Members)

* no marching cymbals

10) Carolina Crown - "Industry"

- Keyboards centered in two rows, marimbas in the front, vibes and xylophone in the back. Timpani and rack on the back right.

Xylophone

- Bells mounted on the xylo

3 Vibraphones

- the vibes had massive wooden boxes mounted on them.

4 Marimbas (4.6)

Timpani
Rack
3 Concert BD
3 Tam-tams
Chimes
(11 Members)

11) Madison Scouts - "Hot Jazz Madison Style"

- Rack on the left, timpani on the right, keyboards centered in mixed arc, drum set on the right.

Bells
Xylophone
2 Vibraphones
3 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Drum set
(12 Members)

12) Colts - "Chivalry"

- Rack on the left, timpani on the right. Keyboards centers in two rows, with "performance windows" grouped by voicing.

Bells
2 Xylophones
3 Vibraphones
3 Marimbas
- Bells on one of the marimbas.
Timpani
Rack
2 Concert BD
2 Tam-tams
(10 Members)

2002

1) The Cavaliers - "Frameworks"

Erik Johnson

- 4 marimbas in the front center, vibes on the outside of the front row w/ two more vibes outside and behind. Symmetrical setup except for the timpani on the far right.

4 Vibraphones (3octaves)
- Bells mounted on one of the vibraphones

4 Marimbas (4.3)

- Piccolo xylophone mounted on center marimba

Timpani

2 Concert bass drums

2 Tam-tams

(9 members)

* no marching cymbals

2) Blue Devils - "Jazz-Made in America"

- Timpani on the left, keyboards on the right in two mixed rows.

Xylophone

3 Vibraphones

4 Marimbas

Timpani

2 Concert BD

2 Tam-tams

(8 members)

* no marching cymbals

3) The Cadets - "An American Revival"

- Three rows. Marimbas in front, Vibes and xylophone bells in middle, timpani in the back row.

Bells

Xylophone

4 Vibraphones

4 Marimbas

Timpani

6 Drum sets

2 Concert BD

2 Tam-tams

Chimes

(12 members)

* no marching cymbals

- Tenor line all play drum set.

4) Santa Clara Vanguard - "Sound, Shape, and Color"

- Timpani left, rack right, keyboards centered in one big mixed arc.

Bells

Xylophone

3 Vibraphones

3 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams
(9 members)

5) Boston Crusaders - "You Are My Star"

- Keyboards centered in mixed arc, timpani to the right, rack to the left.

Xylophone

- Bells mounted on them

3 Vibraphones

4 Marimbas

- bells and crotales mounted on the marimbas and vibes

Timpani

Rack

Concert BD

Tam-tams

Chimes

(11 members)

* no marching cymbals

6) Phantom Regiment - "Heroic Sketches: the passion on Shostakovich"

- Keyboards in two mixed rows, racks on the outside of the back row, timpani in the center of the back row.

4 Vibraphones

3 Marimbas (all synthetic 5 octaves)

- the vibes and marimbas had xylophones, crotales, and bells mounted on them

Timpani

2 Rack

2 Concert BD

2 Tam-tams

Chimes

(10 members)

* no marching cymbals

7) Bluecoats - "Urban Dances"

Tom Rarick takes over as the front ensemble arranger. EJ is still a consultant.

- Keyboards are centered in a big mixed arc, rack on the left, timpani on the right.

3 Vibraphones

4 Marimbas

Timpani

Rack

- xylophones and bells mounted on the racks

2 Concert BD

2 Tam-tams

Chimes

(10 members)

8) Glassmen - "Odyssey"

- Keyboards centered in two rows, with timpani in the dead center of the front row, racks on the right.

Xylophone

- Bells mounted on the xylophone

3 Vibraphones

4 Marimbas (2-4.3, 2-4.6)

- Xylophone mounted on "m2"

3 Timpani stations (1 full set center, 2 single drums on the far right, 1 drum far left)

2 Racks

3 Concert BD

3 Tam-tams

Chimes

(10 members)

9) Crossmen - "The Signature Series"

- Keyboards centered in mixed arc. Timpani on the left, racks in the back right.

Bells

Xylophone

3 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

Timpani

2 Rack

2 Concert BD

2 Tam-tams

(9 members)

10) Spirit from JSU - "Darkness into Light"

- Rack front left, timpani front right. Keyboards centered in one main row. Marimbas in the center, two vibes on either side slightly behind the marimbas. Xylophone in the back center.

Xylophone

4 Vibraphones

4 Marimbas

Timpani

Rack

- the rack has a set of bells mounted on it

2 Concert BD

2 Tam-tams

chimes

(11 members)

11) Magic of Orlando - "Desert Winds"

- Keyboards centered in two rows, grouped by voice. Racks on the outside of the front row, timpani back center.

Bells

Xylophone

3 Vibraphones

3 Marimbas

Timpani

2 Rack

2 Concert bass drums

2 Tam-tams

chimes

(10 members)

* no marching cymbal line

12) Seattle Cascades - "City Riffs"

- Two arcs, keyboards mixed in the front row, timpani centered in the back with percussion on either side.

Xylophone

3 Vibraphones

4 Marimbas

Timpani

Rack

- one has a set of bells and crotales mounted

Drum set

2 Concert BD

2 Tam-tams

Chimes

(15 members)

* no marching cymbals

2003

- I will no longer document the drum corps who do not have a marching cymbal line.

1) Blue Devils - "The Phenomenon of Cool"

- Setup in two rows, timpani centered in the back row on a big riser, xylo to the left and a vibe to the right (in the back row). More keyboards mixed in the front row.

Xylophone

- Bells mounted on the xylophone

3 Vibraphones

4 Marimbas

Timpani
2 Concert BD
2 Tam-tams
Chimes
(9 Members)

2) The Cavaliers - "Spin Cycle"

Erik Johnson

- "Standard Cavaliers setup."

Pedal Glockenspiel (marimba 4 floats back and fourth to this)

4 Vibraphones

4 Marimbas

- m3 has a picc xylo

Timpani

2 Concert BD

2 Tam-tams

(9 Members)

3) The Cadets - "Our Favorite Things"

Neil Larrivee

- Set up in three rows, timpani being centered in the back row. Marimbas in the front row, mixed keyboards in the middle row.

Bells

Xylophone

4 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

Timpani

2 Concert BD

2 Tam-tams

Chimes

(12 Members)

4) Phantom Regiment - "Harmonic Journey"

Rennick

- Two rows, timpani on the left chimes on the right. Marimbas in the front with vibes in the back, xylophone front and center. This has become a common setup.

Xylophone

- Bells mounted on the xylophone

4 Vibraphones

4 Marimbas (4.6 rosewood)

- Bells and crotales mounted on marimbas and vibes.

Timpani

2 Concert BD

2 Tam-tams
Chimes
(10 Members)

5) Santa Clara Vanguard - "Pathways"

Jim Casella

- Timpani left, rack right, bass drum and tam-tams in the corners, keyboards centered in mixed arc.

Pedal Glockenspiel
Xylophone
3 Vibraphones
4 Marimbas (2-4.3, 2-4.6)
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(9 Members)

6) Boston Crusaders - "Bravo"

- Keyboards centered in two rows. Timpani left front, rack right front. Vibes and xylo in the back, marimbas in the front.

Xylophone
- w/ bells mounted
3 Vibraphones
4 Marimbas (4.3)
Timpani
Rack
2 Concert BD
2 Tam-tams
(10 Members)

7) Bluecoats - "Capture and Escape"

Tom Rarick is the arranger. *Brad Palmer* started teaching this year.

- Keyboards centered in one big arc. Marimbas in the middle, vibes on the outsides.
Timpani on the right, rack on the left.

4 Vibraphones
4 Marimbas (rosewood 2-4.3, 2-4.6)
- Bells and Xylo mounted on marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes

(10 Members)

8) Madison Scouts - "Gold, Green, and Red: The Music of Benoit Jutras"

- Timpani centered in the back, rack on the right, keyboards centered in mixed arc.

Bells

Xylophone

2 Vibraphones

3 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

(10 Members)

9) Crossmen - "Color"

Jim Ancona

- Keyboards centered in mixed arc, low marimbas on the outside. Rack on the right, timpani on the left.

Bells

Xylophone

- Bells and xylo as one station

3 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

Timpani

Rack

3 Concert BD

2 Tam-tams

(10 Members)

10) Carolina Crown - "Bell-issimo"

- Racks on the outside, timpani inside that. Keyboards centered in two rows. Marimbas in the front, vibes in the back with glock centered.

Xylophone

- Bells mounted on the xylophone

4 Vibraphones

4 Marimbas (4.6 rosewood)

2 Timpani (2 full time sets)

2 Racks

2 Concert BD

4 Tam-tams

2 Chimes

(14 Members)

- Big ship bell that starts the show.

- every keyboard (and the rack) have auxiliary metallic instruments (either crotales or bells) mounted on it. This no doubt plays into the “bell” idea of the show.
- *Stained Glass* by David Gillingham.

11) Magic of Orlando - “Silver Voices”

- Keyboards mixed in the front row. Timpani centered in the back, rack right of timpani.
- 3 Bells
- Xylophone
- 4 Vibraphones
- 4 Marimbas (2-4.3, 2-4.6)
- 3 Timpani stations (1 full set centered, one drum on the far right, two drums on the far left)
- Rack
- 3 Concert BD
- 3 Tam-tams
- Chimes
- (12 Members)

12) Spirit from JSU - “Time”

- Rack front left, timpani front right. Keyboards centered in one row. Marimbas in the center, two vibes on either side slightly behind the marimbas, xylophone back center.
- Xylophone
- 4 Vibraphones
- 4 Marimbas
- Timpani
- Rack
 - Bells mounted on the rack
- 2 Concert BD
- Tam-tam
- Chimes
- (11 Members)

2004

1) *The Cavaliers “007”*

Erik Johnson

- “Standard Cavaliers setup,” the only variation is that the back row vibraphones are moved in between the front row vibes and the outside marimbas.
- Pedal Glockenspiel
- 4 Vibraphones
- 4 Marimbas (2-4.3, 2-4.5)
 - picc xylo on center marimba

Timpani
Rack
Chimes
2 Concert BD
2 Tam-tams
Chimes
(11 members)

2) Blue Devils “SummerTrain Blues Mix”

- Marimbas on side one, vibes on side two in a straight line. Timpani in the center of the second row with xylo just outside of it on side two.

Xylophone
- Bells mounted on the xylophone
4 Vibraphones
4 Marimbas
Timpani
2 Concert BD
2 Tam-tams
(10 members)

3) Santa Clara Vanguard “Attraction: The music of Scheherazade”

- Keyboards centered in a mixed arc, timpani on the left. rack on the right.

Bells
Xylophone
3 Vibraphones
4 Marimbas (2-4.3, 2-4.6)
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(10 members)

4) The Cadets “Living with The Past: music of Jethro Tull”

- Marimbas in the front row. Vibes, xylo, and glock in 2nd row. Drum set in 3rd row on a riser. Timpani far left.

Pedal Glockenspiel
Bells
Xylophones
4 Vibraphones
4 Marimbas (2-4.3, 2-4.5)
Timpani
Drum set

2 Concert BD
2 Tam-tams
(12 members)

5) Phantom Regiment “Apcionada 874: The Music of Astor Piazzolla”

- Mixed arc setup w/ timpani on the right.

Xylophone

- Bells mounted on the xylophone

4 Vibraphones

4 Marimbas (4.6)

4 Concert BD

2 Tam-tams

Timpani

Chimes

(10 members)

*no amplification

6) Bluecoats “Mood Swings”

- Marimbas front and center, with a xylophone in the middle. Vibes next to outside marimbas, with a vibe in the second row between each outside marimba and front vibe. Timpani and drum set in the second row.

Xylophone

4 Vibraphones

4 Marimbas (2-4.3, 2-4.6)

- Bells mounted on one of the marimbas

Timpani

Drum set

2 Concert BD

2 Tam-tams

Chimes

(10 members)

* no amplification

7) Carolina Crown “Bohemia”

- Marimbas in the front, vibes & xylo in the back. Timpani up front on either side. Rack on the far left.

Xylophone

3 Vibraphones

4 Marimbas (4.6)

2 full sets of Timpani

Rack

2 Concert BD

2 Tam-tams

(11 members)

8) Madison Scouts "Madisonic"

- Keyboards in a mixed line. Timpani and rack in the back row, extra timpani on the outsides.

Xylophone

- Bells mounted on the xylophone

4 Vibraphones

4 Marimbas (2-4.5, 2-4.3)

- Bells mounted on one of the marimbas

Timpani

- two extra timpani on the outside of the front row (a single drum on each side)

Rack

3 Concert BD

2 Tam-tams

(11 members)

9) Boston Crusaders "The Composition of Color"

- Integrated arc setup. Rack on the left, timpani on the right.

Xylophone

4 Marimbas

3 Vibraphones

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(11 members)

* This is the other group that used voice for the first time this year.

10) Blue Knights "A Knight's Tale"

- Timpani and percussion on the far right. Keyboards centered in a mixed arc, in two rows.

Xylophone

4 Vibraphones

4 Marimbas (4.6)

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(12 members)

11) Crossmen “UNITY (Out of Many: One)”

- Keyboards centered in mixed arc. Timpani and racks in the second row, with timpani in the center.

Bells

Xylophone

3 Vibraphones

4 Marimbas (2-4.5, 2-4.3)

Timpani

2 Racks

2 Concert BD

2 Tam-tams

(11 members)

12) Glassmen “The Voice of One: music and movement inspired by Martha Graham.”

- Straight line with wood voices in the center, metal voices on the outsides. Timpani in center of the second row.

Xylophone

3 Marimbas (4.5)

4 Vibraphones

Timpani

2 Racks

2 Concert BD

2 Tam-tams

Chimes

(12 members)

* did not use amplification

2005

1) Cadets “The Zone: dreamscapes in four parts with door”

Niel Lerrivee

- Marimbas in the front row. Vibes in the second row, xylo and glock in the center.
Timpani and racks on the far left.

Pedal Glockenspiel

Xylophone

4 Vibraphones

4 Marimbas (4.5)

Chimes

Timpani

Rack

2 Concert BD

2 Tam-tams

(13 members)

- Drum solo used “vocal percussion” or “beat boxing.”

2) Cavaliers “My Kind of Town”

Erik Johnson

- “Standard Cavaliers setup,” with pedal glock in the back center.

Pedal Glockenspiel

4 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

Timpani

Drum set

2 Concert BD

2 Tam-tams

Chimes

(11 members)

3) Phantom Regiment “Rhapsody”

- Marimbas in the front in a straight line with xylophone in the center. Vibes in back row with timpani in the center.

2 Bells

Xylophone

4 Vibraphones

4 Marimbas (4.6)

Timpani

2 Concert BD

2 Tam-tams

(10 members)

4) Blue Devils “Dance Derby of the Century”

- The whole pit is on side one, centered on the 40 yard line. Marimbas in two rows on the left, vibes in two rows on the right. Timpani, xylophone and drum set in a 3rd row.

Xylophone

- Bells mounted on the xylophone

4 Vibraphones

4 Marimbas (4.3)

Timpani

Drum set

2 Concert BD

2 Tam-tams

(10 members)

5) Bluecoats “Caravan”

- Timpani on the far left. Marimbas front and center with a vibraphone on each end, back row vibraphones between outside marimbas and front rows vibraphones.

Pedal Glockenspiel

-Picc xylo mounted on the pedal glockenspiel.

4 Vibraphone

4 Marimbas (4.5)

Timpani

Rack

2 Concert BD

2 Tam-tams

(11 members)

6) Madison Scouts “The Carmen Project”

- Timpani on the right. Keyboards centered in an integrated arc.

Bells

Xylophone

- Bells and xylophone together in one station

4 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

Timpani

Chimes

3 Concert BD

2 Tam-tams

(10 members)

7) Carolina Crown “Angelus”

Seth Adams

- Unique setup, two “choir arcs.” One arc on each side of the 50, with a “multi percussionist” standing in the space where the two arcs meet. This performer has his xylo and pedal glock set up in a “V” so he can go back and fourth or play both. He has chimes next to him and a concert bass drum behind him. There are timpani in front of each arc.

2 Pedal Glockenspiel

Xylophone

4 Vibraphones

4 Marimbas (4.6)

2 Full sets of timpani

3 Concert BD

2 Tam-tams

Chimes

(10 members)

8) Santa Clara Vanguard “Russia: Revolution/Evolution”

- Keyboards centered in mixed arc, timpani on the left.

Pedal Glockenspiel

Xylophone

3 Vibraphones
4 Marimbas (2-4.3, 2-4.5)
Timpani
2 Concert BD
2 Tam-tams
Chimes
(9 members)

9) Boston Crusaders “Ode to Joy”

- Keyboards in two mixed rows, with timpani in the center of the back row. Racks are in the back corner on both sides.

Bells
Xylophone
3 Vibraphones
4 Marimbas (4.6)
Timpani
2 Racks
Chimes
2 Concert BD
2 Tam-tams
(11 members)

10) Blue Knights “A Midsummers Knights’ Dream”

- Keyboards centered in an arc grouped by voice. Timpani on the right.

Bells
Xylophone
3 Vibraphones
3 Marimbas (4.6)
Timpani
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(10 members)

11) Glassmen “New World Symphony”

- Keyboards centered in a mixed line, timpani on the right, rack on the left.

Pedal glockenspiel
Xylophone
4 Vibraphones
4 Marimbas (4.5)
Timpani
Rack
2 Concert BD

2 Tam-tams
Chimes
(11 members)

12) Spirit of JSU “The Spirit of Broadway”

- Keyboards centered in a slight arc with marimbas in the middle, vibes in pairs on the outside. Timpani centered in the back row, rack in the back on side one.

Pedal glockenspiel

- Piccolo xylophone mounted on the glock.

4 Vibraphones

4 Marimbas (4.3)

- A marimba has a piccolo xylophone.

Timpani

Rack

Drum set

2 Concert BD

2 Tam-tams

(11 members)

2006

1) Cavaliers “The Machine”

- “Standard Cavaliers” setup, with pedal glockenspiel centered in the back, timpani are on the far right.

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel.

4 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

Timpani

2 Concert BD

2 Tam-tams

Chimes

(10 members)

2) Phantom Regiment “Faust”

- Marimbas in the front with the xylophone in the center. Vibes in the back with timpani in the center (pedal glock to the left of the timpani).

Pedal glockenspiel

Xylophone

- Bells mounted on the xylophone

4 Vibraphones

4 Marimbas (4.6)

Timpani

2 Concert BD
2 Tam-tams
Chimes
(10 members)

3) Blue Devils “Godfather, Part Blue”

- Marimbas front and center with a vibraphone on the outside on each side. Two more vibraphones in the second row, outside of the front row vibraphones.
Glockenspiel in the second row in the center. Timpani outside on the far left.
Pedal glockenspiel
- Piccolo xylophone mounted on the glockenspiel.

4 Vibraphones
4 Marimbas (4.5)
Timpani
2 Concert BD
2 Tam-tams
Chimes
(10 members)

4) Bluecoats “Connexus”

- Marimbas front and center, two vibes in the front row on the outsides, two vibes in the second row between outside marimbas and front vibes. Timpani second row on the right. Glockenspiel in the center of the back row, drum set to the left of glockenspiel.
Pedal glockenspiel
- Piccolo xylophone mounted on the glockenspiel.

4 Vibraphones
4 Marimbas (4.5)
Timpani
Drum set
2 Concert BD
2 Tam-tams
Steel pans
(11 players)

5) The Cadets “Volume 2: Through the Looking Glass”

- Marimbas front and center with a vibraphone on the outside on each side, there are two more vibes on the outsides of the back row. Glockenspiel and xylophone are in the center of the back row, with the drum set to the left. Timpani are on the far left side of the setup.

2 Bells
Xylophone
4 Vibraphones
4 Marimbas (4.5)

Timpani
Drum set
2 Concert BD
2 Tam-tam
Chimes (just a few notes mounted on a vibraphone)
(12 Members)

6) Santa Clara Vanguard "Moto Perpetuo"

- Rack back right. Keyboards are centered in a mixed arc. There is a large hand bell station on the far right.

Pedal Glockenspiel
Xylophone
4 Vibraphones
3 Marimbas (2-4.6, 1-5)
Timpani
Rack
2 Concert BD
2 Tam-tam
Chimes
(9 Members)

7) Blue Knights "Dark Knights"

- Keyboards centered in two rows. Marimbas in the front, vibes in the back with glock/xylo centered. Racks on either side w/ timpani on the far right.

Pedal glockenspiel
Xylophone
- Xylophone and glockenspiel are paired in one station
4 Vibraphones
4 Marimbas (2-4.6, 2-5)
Timpani
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(13 Members)

8) Carolina Crown "In.Trance.It"

Seth Adams

- Keyboards centered in mixed arc. Timpani far right, rack in the back corner. Bells in the back row towards the center.

2 Pedal glockenspiels
Xylophone
4 Vibraphones
4 Marimbas

Timpani
Rack
3 Concert BD
2 Tam-tams
Chimes
(11 Members)

9) Madison Scouts “Primal Forces”

- Timpani on the left. Keyboards centered in two rows grouped by voice.

Bells
Xylophone
4 Vibraphones
4 Marimbas
Timpani
4 Concert BD (2 in the pit, 2 on the field)
2 Tam-tams
Chimes
(10 Members)

10) Boston Crusaders “Cathedrals of the Mind”

- Three rows angled in so the whole thing looks like a giant wedge. Keyboards integrated in all three rows, with timpani in the middle of the second row, and the racks in the middle of the back row.

2 Pedal glockenspiels
Xylophone
- One of the glockenspiels are paired with the xylophone as one station.
3 Vibraphones
4 Marimbas
Timpani
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(11 Members)

11) Glassmen “Beethoven: Master and Madness”

- Marimbas front and center with a vibraphone on the outside on each side, there are two more vibes on the outsides of the back row. Glockenspiel and xylophone are in the center of the back row. Timpani on the far left, rack on the far right.

Pedal glockenspiel
Xylophone
4 Vibraphones
4 Marimbas
Timpani

Rack
2 Concert BD
2 Tam-tams
2 Chimes
(12 Members)

12) Spirit of JSU “Old, New, Borrowed & Blue”

- Keyboards setup in two rows with a slight arc. Marimbas are in the front row with a vibraphone on both ends. The other instruments are mixed in the back row.

Pedal glockenspiel

4 Vibraphones

5 Marimbas

- There is a piccolo xylophone mounted on “marimba 5.”

Timpani

Rack

Drum set

2 Concert BD

1 Tam-tams

Chimes

(12 Members)

- This is the first pit with 5 full time marimba players.

2007

1) Blue Devils - “Winged Victory”

- Timpani on the left, rack on far right. Marimbas front and center with a vibraphone on both ends. The other vibraphones are in the second row, between the outside marimbas and the front row vibes.

4 Vibraphone

4 Marimba (4.5)

- Piccolo xylophone mounted on the center marimba

Timpani

Rack

2 Concert BD

Tam-tams

Chimes

(10 Members)

2) The Cadets - “This I believe”

- Keyboards centered in 2 rows, marimbas in the front, vibes in the back. Timpani on the left, rack on the right.

Bells

Xylophone

4 Vibraphones
4 Marimbas (4.5)
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(11 Members)

3) The Cavaliers - “And so it goes”

- “Standard Cavaliers” setup, with pedal glock/xylo and drum set centered in the back, timpani are on the far right.

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones
4 Marimbas (2-4.3, 2-4.5)
Timpani
Drum set
2 Concert BD
2 Tam-tams
(11 Members)

4) Phantom Regiment - “On Air”

Rennick

- Timpani on the left, Marimbas in the front row w/ xylophone in the middle. Vibes in the back row with glockenspiel in the center.

Pedal glockenspiel

Xylophone

5 Vibraphones
4 Marimbas (4.6)
Timpani
2 Concert BD
2 Tam-tams
Chimes
(11 Members)

* *Vespertine Formations* (Christopher Deane) was the opener.

- This is the first time five full time vibraphone players were used.

5) Santa Clara Vanguard - “!(Eureka)”

- Setup in two rows. Marimbas are in the front row with glock/xylo in the center.

Vibraphones are in the second row. Rack on the left, timpani on the right of the back row.

Pedal glockenspiel

Xylophone

4 Vibraphones
4 Marimbas (2-4.6, 2-5)
Timpani
Rack
Concert BD
2 Tam-tams
Chimes
(10 Members)

6) Carolina Crown - "Triple Crown"

Andrew Markworth

- "Traditional Cavaliers setup" with Glock/xylo in the back center. Timpani to the far right.

Pedal glockenspiel

-Piccolo xylophone mounted on the glockenspiel

4 Vibraphones
4 Marimbas (4.5)
Timpani
Rack
2 Concert BD
2 Tam-tams
(11 Members)

7) Bluecoats - "Criminal"

Tom Rarick

- Marimbas front and center, two vibes in the front row on the outsides, two vibes in the second row between outside marimbas and front vibes. Timpani on the right.

Glockenspiel, xylophone, and drum set in the back row.

Pedal glockenspiel

Xylophone

4 Vibraphones
4 Marimbas (2-4.3, 2-4.5)
Timpani
Drum set
2 Concert BD
2 Tam-tams
(12 Members)

8) Blue Knights - "Dark Dances"

- Keyboards centered in two rows, marimbas in the front, vibes in back with xylophone in the center. They are all slightly angled into the timpani, who are set up on the left. There is a rack on each side of the ensemble.

Xylophone

- Bells mounted on the xylophone

4 Vibraphones (2-4.6, 2-5)
4 Marimbas
Timpani
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(12 Members)

9) Boston Crusaders - "A Picasso Suite"

- Three rows angled in so it looks like a giant wedge. Glockenspiel and xylophone are front center with two marimbas on either side. Timpani in the center of 2nd row, then vibes and marimbas. the second row has a steep arc. The third row has another vibraphone and another pedal glockenspiel on the right w/ chimes.

2 Pedal glockenspiel

- one as a glock/xylo station, and extra in the back right w/ crotales next to chimes.

Xylophone

- Paired with the glockenspiel

3 Vibraphones

4 Marimbas (4.6, rosewood)

Timpani

2 Racks

2 Concert BD

2 Tam-tams

(12 Members)

- they micd their keyboards from above

10) Colts - "Equinox"

- Keyboards in two mixed rows, timpani in the center of the back row, rack on the far right.

4 Vibraphones

- Bells mounted on one of the vibraphones

4 Marimbas (2-4.3, 2-4.5)

- Piccolo xylophone mounted on a back row marimba

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(10 Members)

11) Glassmen - "Gitano"

- Keyboards setup in two rows, grouped by voice. Timpani in the center of the back row, with a "performance window" in the front row. Rack on the right side of the front row.

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

Xylophone

3 Vibraphones

3 Marimbas (4.5)

Timpani

Rack

2 Concert BD

2 Tam-tams

(10 Members)

12) Spirit from JSU - "Genesis"

- Setup in two rows. Marimbas front and center, vibes on the outside w/ two more vibes outside of that and behind. Back row: timpani-xylo-glock.

Pedal glockenspiel

Xylophone

4 Vibraphones

4 Marimbas (2-4.6, 2-5.)

Timpani

2 Concert BD

2 Tam-tams

Chimes

(11 Members)

2008

1) Phantom Regiment - "Spartacus"

- Setup in two rows. Marimbas in the front row with xylophone in the center. Vibraphones in the back row, timpani centered in the back row, rack on the far right.

Xylophone

- Bells mounted on the xylophone

5 Vibraphones

4 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(12 members)

2) Blue Devils - "Constantly Risking Absurdity"

- Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set and xylophone also in the back row. Timpani on the far left, facing straight down the marimba line.

Xylophone

- Bells mounted on the xylophone

4 Vibraphones

5 Marimbas

Timpani

Drum set

2 Concert BD

2 Tam-tams

Chimes

(12 members)

3) The Cavaliers - "Samurai"

Erik Johnson

- "Traditional Cavaliers" setup, glockenspiel in the center of the back, timpani on the far right. Hammer dulcimer on the front left

Pedal glockenspiel

-Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

5 Marimbas (3-4.3, 2-4.5)

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

Hammer dulcimer

- Small taiko drums on the low end of the marimbas, and larger taiko drums in the back corners.

(13 members)

4) Carolina Crown - "Finis"

Andrew Markworth

- "Traditional Cavaliers setup", glockenspiel back center, timpani on the far right.

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

4 Marimbas (4.5)

Timpani

2 Racks
2 Concert BD
2 Tam-tams
2 Chimes
(12 members)

5) The Cadets - "...and the Pursuit of Happiness"

- Setup in two rows. Marimbas in the front, vibes in the back with glock/xylo centered.
Timpani on the front left, racks on the outside.

Pedal Glockenspiel

Xylophone

- together in one station

4 Vibraphones (all 4 octave vibes)

4 Marimbas

Timpani

2 Racks

2 Concert BD

2 Tam-tams

Chimes

(12 members)

6) Bluecoats - "the Knockout"

Tom Rarick

- Marimbas front and center, two vibes in the front row on the outsides, two vibes in the second row between outside marimbas and front vibes. Timpani on the right.

Glockenspiel, xylophone, and drum set in the back row.

Pedal glockenspiel

Xylophone

4 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

- Drum set bd mounted on the end of each marimba

Timpani

Drum set

2 Concert BD

2 Tam-tams

(12 members)

7) Santa Clara Vanguard - "3HREE Mindy-Body Soul"

- Setup in two rows. Two marimbas centered in the front row, with a pair of vibraphones on either side. Timpani centered in the back row with a marimba on either side.

4 Vibraphones

- Bells mounted on a vibraphone

4 Marimbas

- Piccolo xylophone mounted on a marimba

Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(9 members)

8) Blue Stars - "Le Tour..."

- Two rows, marimbas in the front. Everything else was mixed in the back row, with the vibraphones paired together and the timpani in the center.

Pedal glockenspiel
Xylophone
4 Vibraphones
5 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
2 Chimes
(13 members)

9) Blue Knights - "Knight Reign"

- Setup in two rows with a slight arc. Marimbas are in the front row with xylophone in the center. Vibraphones are in pairs on the outside of the back row, with timpani and rack in the middle.

Xylophone
- Bells mounted on the xylophone
4 Vibraphones
4 Marimbas (2-4.5, 2-5)
Timpani
Rack
Concert BD
Tam-tam
Chimes
(11members)

10) Boston Crusaders - "NEOCOSMOS"

- Marimbas in the front row with xylophone centered. Timpani centered in back row with a pair of vibraphones on either side, the racks are on each end.

Pedal glockenspiel
- Paired with one of the marimbas.
Xylophone
4 Vibraphones
4 Marimbas

Timpani
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(9 members)

11) Glassmen - "Kar-ne-val"

- Marimbas centered in the front row with two vibes on the outside. There are two more vibes in the back row between outside marimbas and front vibes. Racks on the outsides. Timpani and xylophone split the center of the back row.

Xylophone

- Bells mounted on the xylophone

4 Vibraphones
5 Marimbas
Timpani
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(13 members)

12) Madison Scouts - "Le Noche de la Iguana"

- Setup in two rows. Marimbas front and center with two vibes on the outside of the front row. Two more vibraphones in the back row, outside of each front row vibe. Glock/xylo and timpani split the center of the back row. Racks are on the far right.

Pedal glockenspiel

Xylophone

- Glockenspiel and xylophone are together in one station.

4 Vibraphones
4 Marimbas
Timpani
2 Racks
2 Concert BD
2 Tam-tams
(13 members)

2009

- Electronic Instruments are now legal.

1) Blue Devils - "1930"

- Setup in two rows. Timpani far left, facing straight down the marimba line. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set and xylophone centered in the back row, synth just to the left of the drum set.

Synthesizer

Pedal glockenspiel

Xylophone

- In one station with the glockenspiel

4 Vibraphones

5 Marimbas (4.5)

Timpani

Drum set

- with a DTX

2 Concert BD

2 Tam-tams

Chimes

(12 members)

2) Carolina Crown - "The Grass is Always Greener"

-Marimbas front center, vibes on the outside w/ more vibes back and out. Pedal glock back center with a rack on left and synth on right. Timpani on the far right.

Synthesizer

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

4 Marimbas (4.5)

Timpani

Rack

2 Concert BD

2 Tam-tams

(12 members)

3) Holy Name Cadets "West Side Story '09: Conflict and Resolution"

- Setup in two rows, large arcs. Marimbas in the center of the front row the vibes on the outside. All other instruments mixed in the back row.

Synthesizer

MalletKAT

Pedal glockenspiel

Xylophone

4 Vibraphones

4 Marimbas (4.5)

Timpani

3 Racks

Drum set
3 Concert BD
2 Tam-tams
Chimes
(15 members)

4) The Cavaliers - "the Great Divide"

- "Traditional Cavaliers setup," with timpani on the far right. Glock/xylo centered in the back row with the rack to the left and synth to the right.

Synthesizer
Pedal glockenspiel
- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones (4 octaves)

5 Marimbas

Timpani

Rack
- DTX

2 Concert BD

2 Tam-tams

Chimes

(13 members)

5) Santa Clara Vanguard - "Ballet for Martha"

- Big arc, marimbas in the middle, vibes on the outside. Timpani on the left. Synthesizer in the back row on the left, rack on the back row on the right.

Synthesizer
Pedal glockenspiel
4 Vibraphones
4 Marimbas
- Piccolo xylophone mounted on one of the marimbas

Timpani

Rack

1 Concert BD

1 Tam-tams

Chimes

(11 members)

6) Bluecoats - "Imagine"

Tom Rarick

- Marimbas front and center, two vibes in the front row on the outsides, two vibes in the second row between outside marimbas and front vibes. Glock/xylo centered in the back row with drum set on the right and synth on the left. Timpani are on the far right.

Synthesizer

Pedal glockenspiel
- Piccolo xylophone mounted on the glockenspiel
4 Vibraphones
4 Marimbas (2-4.3, 2-4.5)
Timpani
Drum set
2 Concert BD
2 Tam-tams
(11 members)

7) Boston Crusaders - "The Core of Temptation"

- Setup in a arc with two rows. Marimbas in the front row, with timpani on the left. Vibes and glockenspiel in the back row, with the rack on the right.

Synthesizer
- mounted on a vibraphone
Pedal glockenspiel
Xylophone
- With the glockenspiel as one station
5 Vibraphones
- one has a DTX

4 Marimbas (4.6)
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(12 members)

8) Blue Stars - "The Factory"

- Set up in two rows. Back row: v-s-r-t-g-x-v. Front row: v-marimbas-v.

2 Synthesizers
Pedal glockenspiel
Xylophone
4 Vibraphones
4 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(14 members)

9) Phantom Regiment - "The Red Violin"

- Setup in two rows. Marimbas in the front row with xylophone in the middle. Timpani in the center of the back with vibes on either side. The synth is in the back row on the far right.

2 Synthesizers

- One stand alone station on the far right, one station next to a vibraphone

Bells

Xylophone

6 Vibraphones

4 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(13 members)

10) Glassmen - "the Journey of ONE"

- Set up in two rows. Marimbas in the center of the front row with two vibes on the outside. Two more vibes in back row between outside marimbas and front vibes. Drum set in the center of the back row with synth to the left, and glock/xylo on the right. Racks on the outsides.

2 Synthesizers (one full time, the other is cover by a rack player)

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

5 Marimbas

2 Racks

Drum set

2 Concert BD

2 Tam-tams

Chimes

(13 members)

11) Blue Knights - "Shiver: a Winter in Colorado"

- Set up in two rows. Woods in the the front row, metals and synthesizer in the back row. Rack on the left, timpani on the right.

Synthesizer

Xylophone

5 Vibraphones

4 Marimbas (2-4.6, 2-5)

Timpani

2 Racks

2 Concert BD

2 Tam-tams
Chimes
(13 members)

12) Troopers - "West Side Story"

- Keyboards are centered in a arc. Marimbas in the middle, vibes on the outside. Timpani in the center of the back row with glock to the left, synth to the right. Rack back left.

Synthesizer
Pedal glockenspiel
4 Vibraphones
4 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(11 members)

2010

1) Blue Devils - "Through a Glass, Darkly"

- Setup in two rows. Timpani far left, facing straight down the marimba line. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set and xylophone centered in the back row, synth just to the left of the drum set.

Synthesizer
Pedal glockenspiel
Xylophone
- In one station with the glockenspiel
4 Vibraphones
5 Marimbas (4.5)
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(13 members)

2) The Cavaliers - "Mad World"

- "Traditional Cavaliers setup," with timpani on the far right. Glock/xylo centered in the back row with the rack to the left and synths to the right.

2 Synthesizers

- one of the synthesizers had a lot of percussion instruments attached to it, this performer sometime served as an auxiliary percussionist.

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel
- DTX

4 Vibraphones (2-3, 2-4)

5 Marimbas (4.5)

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(14 members)

3) Bluecoats - "Metropolis: The Future is Now"

Tom Rarick, Kevin Shah

- Marimbas front and center, two vibes in the front row on the outsides, two vibes in the second row between outside marimbas and front vibes. Pedal glock was next to the back left vibe. The synth and Xylosynth were on the left side of the back row, drum set and rack were on the right side of the back row.

Synthesizer

Xylosynth

Pedal glockenspiel

- Paired with a vibraphone

4 Vibraphones (2-3, 2-4)

5 Marimbas (3-4.3, 2-4.5)

- One of the marimbas had a piccolo xylophone mounted it.

Drum set

- DTX

Rack

2 Concert BD

2 Tam-tams

(13 members)

4) Carolina Crown - "A Second Chance"

Markworth

- Marimbas front and center, vibes flanking with two more back and outside. Glock center of back row w/ rack on left and synth on right. Timpani on the far right.

1 Synthesizer

Pedal glockenspiel

4 Vibraphones (2-3, 2-4)

4 Marimbas (4.5)

Timpani

Rack

2 Concert BD
2 Tam-tams
(13 members)

5) The Cadets - "Toy Souldier"

- Setup in two rows. Keyboards in the front row in a big arc, marimbas in the center vibes on the outside. The other instruments are mixed up in the back row.

Synthesizer
MalletKAT
Pedal glockenspiel
Xylophone
4 Vibraphones (4)
4 Marimbas (4.5)
Timpani
2 Racks
2 Concert BD
2 Tam-tams
Chimes
(14 members)

6) Phantom Regiment - "Into the Light"

Rennick

- Setup in two rows. The front row has marimbas with xylophone in the center, pedal glock far right. Vibes are in the back row with timpani in the middle. Synths are on the left side in two rows.

2 Synthesizers
Pedal glockenspiel
Xylophone
- Bells mounted on the xylophone
6 Vibraphones
4 Marimbas (4.5)
Timpani
3 Concert BD
2 Tam-tams
Chimes
(14 members)

7) Santa Clara Vanguard - "Bartok"

- Set up in two mixed rows. The timpani are on the left, looking down the keyboard line.

2 Synthesizers
Pedal glockenspiel
4 Vibraphones
4 Marimbas (4.6)
- Piccolo xylophone mounted on one of the marimbas.

Timpani
Rack
1 Concert BD
1 Tam-tam
Chimes
(13 members)

8) Blue Stars - "Houdini"

- Setup in two rows, with timpani on the left facing down the keyboard line. Marimbas are in the front row with the rack on the right. Vibraphones of the left side of the back row, with a synth in the middle of the back row. Glockenspiel, xylophone, and MalletKAT are on the right side of the back row.

Synthesizer
MalletKAT
Pedal glockenspiel
Xylophone
- In one station with the glockenspiel
4 Vibraphones
4 Marimbas
Timpani
Rack
2 Concert BD
Tam-tam
Chimes
(12 members)

9) Boston Crusaders - "Thy Kingdom Come!"

- Two rows that are in a arc. Each row is mixed, with marimbas in the front row and timpani in the center of the back row.

Synthesizer
Pedal glockenspiel
Xylophone
4 Vibraphones
- DTX mounted on one of the vibraphones
5 Marimbas (2-4.3, 2-4.6, 1-5)
Timpani
Rack
2 Concert BD
2 Tam-tams
Chimes
(15 members)

10) Madison Scouts

- Marimbas front and center, two vibes flanking with 2 more outside and behind. Synth and drum set on the left side of the back row, glockenspiel on the right side of the back row.

2 Synthesizers

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

Timpani

Drum set

Concert BD

Tam-tam

(14 members)

11) Blue Knights - "Europa"

- Set up in two rows, with a slight arc grouped by voice. Marimbas are in the front row, vibraphones are in the back row.

Synthesizer

Pedal glockenspiel

Xylophone

4 Vibraphones

4 Marimbas

Timpani

2 Racks

2 Concert BD

2 Tam-tams

Chimes

(14 members)

12) Glassmen - "The Prayer Circle"

- Setup in two rows. Marimbas front center with two vibes flanking, and two more vibes outside and behind. Timpani on the right, rack on the left. Glock and synth splitting the center of the back row.

Synthesizer

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

4 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

(12 members)

2011

1) The Cadets - "Between Angels and Demons"

- Setup in two rows. Marimbas are in the front with glock/xylo in the middle and two vibes on the outside. The back row vibes are between the outside marimbas and front vibes. Rack and timpani are in the center of the back row with electronics on either side.

2 Synthesizers

Xylosynth

Pedal glockenspiel

Xylophone

4 Vibraphones (4)

4 Marimbas (4.5)

Timpani

2 Racks

2 Concert BD

2 Tam-tams

(15 members)

2) Blue Devils - "The Beat my Heart Skipped"

- Setup in two rows. Timpani far left, facing straight down the marimba line. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set and xylophone centered in the back row, synth just to the left of the drum set.

Synthesizer

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

5 Marimbas (4.5)

Timpani

Rack

2 Concert BD

2 Tam-tams

Chimes

(13 members)

3) The Cavaliers - "XtraordinarY"

- "Traditional Cavaliers setup," with timpani on the far right. Glock/xylo and drum set centered in the back row with the rack to the left and synths to the right.

2 Synthesizers

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones (4)

5 Marimbas (4.5)

Timpani
Drum set
2 Concert BD
2 Tam-tams
Chimes
(14 members)

4) Carolina Crown - "Rock Star"

Markworth

- Keyboards setup in two straight rows, marimbas in the front w/ a synth on the left. The other keyboards are mixed in the back row. Drum set on the left on a riser, with another synth to the left of that also on a riser at an angle.

2 Synthesizers

Pedal Glock

Xylophone

- DTX

4 Vibraphones (4)

5 Marimbas (4.5)

Drum set

- On a riser, w/ double bass drum

2 Concert BD

2 Tam-tams

(14 members)

- Very unique use of the piano as a solo instrument for a lot of the show.

5) Phantom Regiment - "Juliet"

Megan Hills was the front ensemble coordinator.

- Set up in two rows. Marimbas front and center with two vibes flanking, two more vibes outside and behind. Glockenspiel is in the center of the back row with the synth on the right, and the rack on the left. Timpani are on the far right, facing down the keyboard line.

Synthesizer

Pedal glockenspiel

-Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

5 Marimbas

Timpani

Rack

- A lot of electronic instruments included in this rack.

2 Concert BD

2 Tam-tams

(13 members)

6) Santa Clara Vanguard - "The Devil's Staircase"

Rennick

- Setup in two rows. Marimbas are in the front row with xylo in the middle. Vibes are in the back row with timpani in the middle. The rack is on the far right, and the Synths are on the left in two rows slightly angled into the rest of the pit.

2 Synthesizers

Xylophone

- Bells mounted on the xylophone.

6 Vibraphones

4 Marimbas (all 5 octave rosewood)

Timpani

Rack

2 Concert Bass Drums

2 Tam-tams

Chimes

(14 members)

7) Bluecoats - "Brave New World"

Tom Rarick, Kevin Shah

- Set up in two rows. Marimbas front and center with two vibes flanking, and two more vibes in the back row between the front row vibes and the outside marimbas.

Synthesizer is centered in the back row, with glockenspiel to the left and rack to the right.

Synthesizer

Pedal glockenspiel

- Paired with a vibraphone

4 Vibraphones (4)

5 Marimbas (4.5)

Rack

2 Concert BD

2 Tam-tams

(11 members)

8) Boston Crusaders - "Revolution"

- Marimbas in front row, vibes in back row with timpani in the center. Racks in the corners of the back row.

Synthesizer

- Mounted on one of the vibraphones.

Xylophone

5 Vibraphones

- Bells mounted on one of the vibraphones.

5 Marimbas (4.5)

Timpani

2 Racks

2 Concert BD
2 Tam-tams
Chimes
(13 members)

9) Blue Knights - "An English Folk Song Suite"

- Setup in two rows with an arc, instruments are grouped by voice with marimbas in the front and vibes in the back.

Synthesizer

- DTX

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel.

4 Vibraphones

4 Marimbas

Timpani

2 Racks

2 Concert BD

2 Tam-tams

Chimes

(13 members)

10) Madison Scouts - "New York Morning"

- Setup in two rows. Marimbas front and center with two vibes flanking, there are two more vibes back and outside. Synths are centered in the back row with glockenspiel to the right, timpani and drum set on the left.

2 Synthesizers

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel.

4 Vibraphones

4 Marimbas (2-4.3, 2-4.5)

Timpani

Drum set

- DTX

Concert BD

Tam-tam

(13 members)

11) Blue Stars - "ReBourne"

- Setup in two rows. Marimbas in the front row with the synth on the far left.

Vibraphones in the back row mixed with all of the other instruments.

Synthesizer

MalletKAT

2 Pedal glockenspiels

Xylophone

4 Vibraphones
4 Marimbas
Rack
2 Concert BD
1 Tam-tams
Chimes
(11 members)

12) Spirit of Atlanta - "ATL Confidential"

- Set up in two mixed rows. All of the marimbas are on the front row, while two vibraphones are in the front and back row.

Synthesizer
Pedal glockenspiel
4 Vibraphones
4 Marimbas (2-4.6, 2-4.3)
Timpani
Rack
2 Concert BD
2 Tam-tams
(13 members)

2012

1) Blue Devils - "Cabaret Voltaire"

- Setup in two rows. Timpani far left, facing straight down the marimba line. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set centered in the back row, synth just to the left and glock/xylo to the right.

Synthesizer
Pedal glockenspiel
Xylophone
4 Vibraphones
4 Marimbas
 -"Alubells" mounted on one of the marimbas.
Timpani
Drum set
2 Concert BD
2 Tam-tams
Chimes
(12 members)

2) Carolina Crown - "For The Common Good"

Markworth

- “Traditional Cavaliers setup” with timpani on the far right. Synthesizers, glockenspiel, and xylophone are in the back row between the vibraphones.

2 Synthesizers

Pedal glockenspiel

- DTX

Xylophone

4 Vibraphones (4)

4 Marimbas (4.5)

Timpani

Rack

2 Concert BD

2 Tam-tams

(14 members)

3) Phantom Regiment - “Turandot”

Meagan Hills taught this ensemble

- Setup in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Timpani on the far right. Synth in the center of the back row, rack to left vibe to right.

Synthesizer

5 Vibraphones

- Bells mounted on one of the vibraphones

5 Marimbas (4.5)

Timpani

Rack

- DTX

2 Concert BD

2 Tam-tams

(13 members)

4) The Cadets - “12.25”

- Set up in two rows with an arc. Marimbas in the center of the front row with a vibraphone on each end. Timpani are in the center of the back row with rack on the right, and glock/xylo on the left. Synths are on the outside of the front row, the other two vibraphones are in the back corners.

2 Synthesizers

Xylosynth

Pedal glockenspiel

Xylophone

- Paired with the glockenspiel into one station.

4 Vibraphones (4)

4 Marimbas (4.5)

Timpani

2 Racks
1 Concert BD
2 Tam-tams
Chimes
(15 members)

5) Santa Clara Vanguard - "Music of The Starry Night"

Rennick

- Set up in two rows with timpani far right. Marimbas in the front row with synth on the left. Vibes in the back row with xylophone in the middle.

Synthesizer

Xylophone

- Bells mounted on the xylophone

5 Vibraphones

5 Marimbas (4.5)

- they have "Alubells" on one of the marimbas and two of the vibes.

- Roland drum pads on some of the keyboards

Timpani

2 Concert BD

2 Tam-tams

Chimes

(13 members)

6) Bluecoats - "UnMasqued"

Tom Rarick

- Setup in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set and synth centered in the back row.

Synthesizer

Pedal glockenspiel

- DTX

4 Vibraphones (4)

5 Marimbas (4.5)

- Piccolo xylophone mounted on the center marimba

Drum set

-DTX

2 Concert BD

2 Tam-tams

(12 members)

7) Boston Crusaders - "The Titans"

- "Traditional Cavaliers setup" with timpani far right. Chimes and vibraphone splitting the center of the back row, xylophone to the right and synth to the left.

Synthesizer

Pedal glockenspiel
Xylophone
- Paired with the glockenspiel in one station
5 Vibraphones
5 Marimbas
Timpani
2 Concert BD
2 Tam-tams
Chimes
(13 members)

8) The Cavaliers - "15 Minutes of Fame"

- "Traditional Cavaliers setup" with timpani on the far right. Synths and glock/xylo splitting the center of the back row.

2 Synthesizers
Pedal glockenspiel
Xylophone
4 Vibraphones (4)
5 Marimbas (4.5)
Timpani
Drum set
2 Concert BD
2 Tam-tams
(14 members)

9) Madison Scouts - "Reframed"

- Set up in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set and synths splitting the center of the back row, with xylophone to the left of the drum set.

2 Synthesizers
Pedal glockenspiel
- Piccolo xylophone mounted on the glockenspiel
4 Vibraphones
5 Marimbas (2-4.3, 3-4.5)
Timpani
Drum set
Concert BD
Tam-tam
(14 members)

10) Blue Knights - "Avian"

- Set up in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside

marimbas. Racks are in the back corners. Glockenspiel in centered in the back row with synths to the left and xylophone on the right.

2 Synthesizers

Xylosynth

- Mounted on the glockenspiel

Pedal glockenspiel

Xylophone

4 Vibraphones

4 Marimbas

Timpani

2 Racks

2 Concert BD

2 Tam-tams

Chimes

(15 members)

11) Spirit of Atlanta - "Sin City"

Erik Kosman taught this ensemble

- "Traditional Cavaliers setup" with the rack in the center of the back row. The synth was to the right of the rack, and the bells on the left.

2 Synthesizers

- One stand alone synth, the other mounted on a marimba.

Pedal glockenspiel

4 Vibraphones

4 Marimbas

-DTX on one of the marimbas

Timpani (two drums inside of the percussion rack)

Rack

2 Concert BD

2 Tam-tams

(10 members)

12) Crossmen - "Fragile"

- Setup in two rows. Marimbas centered in the front row, with synths on the outsides.

Vibes are in pairs on the outside of the back row. Drum set is centered in the back row with xylophone on the right, and glockenspiel on the left.

2 Synthesizers

Pedal glockenspiel

Xylophone

4 Vibraphones

5 Marimbas (4.5)

Timpani

Drum set

2 Concert BD

2 Tam-tams
(15 members)

2013

1) Carolina Crown - "E=mc²"

Markworth

- Modified "traditional Cavaliers setup." Timpani center in back row, xylophone and rack to the right, glockenspiel and synths to the left.

2 Synthesizers

Pedal glockenspiel

- DTX

Xylophone

4 Vibraphones (4)

5 Marimbas (4.5)

Timpani

Rack

2 Concert BD

2 Tam-tams

(14 members)

- Concert bass drums and gongs on the field (they are not included in this instrumentation). They were played by musicians on the field.

2) Blue Devils - "the re:Rite of Spring"

- Setup in two rows. Timpani far left, facing the field. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set centered in the back row, synth just to the left and glock/xylo to the right.

Synthesizer

Pedal glockenspiel

Xylophone

- Paired with glockenspiel into one station

4 Vibraphones

5 Marimbas

- "Alubells" mounted on one of the marimbas.

Timpani

Drum set

2 Concert BD

2 Tam-tams

(12 members)

3) The Cadets - "Side by Side"

- Setup in 2 rows, straight lines. Marimbas front and center a vibraphone on each end. Timpani in the center of the back row, rack on the right. Glockenspiel and

xylophone to the left, then drum set. Synths on the outside of the front row. Vibes in the back corners, xylosynth just inside of the back left vibraphone.

2 Synthesizers

Xylosynth

Pedal glockenspiel

Xylophone

- Paired with the glockenspiel into one station

4 Vibraphones (4)

5 Marimbas (4.5)

- Bells between the inside marimbas

Timpani (1 full set, 2 extra drums by the drum set)

Rack

Drum set

3 Concert BD

2 Tam-tams

(16 members)

4) Santa Clara Vanguard - "Les Miserables"

Rennick

- Setup in two rows. Marimbas in the front row, timpani and chimes to the right. Vibes in the back row with xylophone in the middle. Synth on the front left.

Synthesizer

Xylophone

- Bells mounted on the xylophone

5 Vibraphones

5 Marimbas (4.5)

Timpani

2 Concert BD

2 Tam-tams

Chimes

(13 members)

5) Bluecoats "... to look for America"

Tom Rarick

- Setup in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Drum set and synth centered in the back row.

Synthesizer

Pedal glockenspiel

4 Vibraphones (3)

5 Marimbas (4.5)

Drum set

-DTX

2 Concert BD

2 Tam-tams

6) Phantom Regiment - "Triumphant Journey"

Megan Hills was the coordinator; *Matt Jordan* was the arranger.

- Setup in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Timpani far right, synth far left. Glockenspiel centered in the back row with the xylophone on the right and a vibraphone on left.

Synthesizer

Pedal glockenspiel

Xylophone

- Paired with the glockenspiel into one station

5 Vibraphones

5 Marimbas (3-4.6, 2-5)

Timpani

2 Concert BD

2 Tam-tams

(13 members)

7) The Cavaliers - "Secret Society"

- "Traditional Cavaliers setup" with timpani on the right. Glockenspiel and xylophone are splitting the center of the back row with synths to the right, rack and drum set to the left.

2 Synthesizers

Pedal glockenspiel

Xylophone

4 Vibraphones (4)

5 Marimbas (4.5)

Timpani

Rack

Drum set

2 Concert BD

2 Tam-tams

Chimes

(16 members)

8) Boston Crusaders - "RISE"

- "Traditional Cavaliers setup" with timpani on the right. There is a vibraphone centered in the back row with a synth to the left, and bells/xylo to the right.

Synthesizer

Bells

Xylophone

- Paired with the bells in one station

5 Vibraphones

5 Marimbas
Timpani
2 Concert BD
2 Tam-tams
(13 members)

9) Madison Scouts - "Corps of Brothers - 75 years of survival"

Alex Kluttz taught this ensemble

- Setup in two rows, with an arc. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas. Glockenspiel and rack on the left of the back row, synths on the right side of the back row.

2 Synthesizers
Pedal glockenspiel
- Piccolo xylophone mounted on the glockenspiel
4 Vibraphones
5 Marimbas
Rack
2 Concert BD
2 Tam-tams
(13 members)

10) Blue Knights - "NoBeggingNoEnd"

Rod Kosterman taught this ensemble.

- Setup in two rows. Marimbas in the front row, vibes in the back row with the synth in the middle. The racks are in the back corners.

Synthesizer
4 Vibraphones
5 Marimbas
- Bells and xylophones were mounted on marimbas and vibes
- There were also DTXs and MIDI controllers on these instruments

Timpani
2 Racks
2 Concert BD
2 Tam-tams
(13 members)

11) Spirit of Atlanta - "Speakeasy"

Erik Kosman taught this ensemble

- Setup in two rows, with an arc. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row between the front vibes and outside marimbas.

Synthesizer
Xylophone

- Bells mounted on the xylophone
4 Vibraphones
5 Marimbas
Drum set
2 Concert BD
2 Tam-tams
(12 members)

12) Blue Stars - "Voodoo: I put a spell on you"

- Modified "traditional Cavaliers setup," with drum set centered in the back row. Glock/xylo were to the right of the drum set, with timpani in the back right corner.

Synths are in the back row to the left of the drum set.

2 Synthesizers
Pedal glockenspiel
Xylophone

- Paired with the glockenspiel into one station

4 Vibraphones
4 Marimbas
Timpani
Rack
Drum set
2 Concert BD
2 Tam-tams
(14 members)

2014

1) Blue Devils - "Felliniesque"

- Setup in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row outside of the front row vibes. Drum set centered in the back row, synth on the left and glock/xylo on the right.

Timpani on the far left facing down the keyboard line.

Synthesizer
Pedal glockenspiel
Xylophone

- Paired with the glockenspiel into one station

4 Vibraphones
5 Marimbas
Timpani
Rack
Drum set
2 Concert BD
2 Tam-tams

(13 members)

2) Bluecoats - "Tilt"

Tom Rarick

- They were setup in two rows on a tilt, part of the ensemble being on the field. Marimbas and vibes in the front row, vibes on left marimbas on right. Drum set and synth split the center of the back row. Pedal glockenspiel in the back row between the vibes, xylophone in the back row between marimbas.

Synthesizer

Pedal glockenspiel

Xylophone

4 Vibraphones

4 Marimbas

Drum set

Concert Bass Drum

Tam-tam

Steel drums

(12 members)

3) The Cadets - "Promise: an American Portrait"

- Setup in 2 rows, straight lines. Marimbas front and center a vibraphone on each end. Timpani in the center of the back row, rack on the right. Glockenspiel and xylophone to the left, then drum set. Synths on the outside of the front row. Vibes in the back corners, xylosynth just inside of the back left vibraphone.

2 Synthesizers

Xylosynth

Pedal glockenspiel

Xylophone

- Paired with the glockenspiel into one station

4 Vibraphones (4)

5 Marimbas (4.5)

- Bells between the inside marimbas

Timpani (1 full set, 2 extra drums by the drum set)

Rack

2 Concert BD

4 Tam-tams

(16 members)

4) Santa Clara Vanguard - "Scheherazade: words 2 live by"

Rennick

- Setup in two rows. Marimbas in the front row, vibes in the back row with xylophone in the center. The synth is on the front left, and timpani on the far right.

Synthesizer

Xylophone

- Bells mounted on the xylophone
- DTX

5 Vibraphones
5 Marimbas
Timpani
2 Concert BD
2 Tam-tams
Chimes
(14 members)

5) Carolina Crown - "Out of This World"

Markworth

- Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row outside of the front row vibes. Timpani centered in the back row with the rack to the right, and the synths to the left.

2 Synthesizers
4 Vibraphones
6 Marimbas
Timpani
Rack
2 Concert BD
2 Tam-tams
(14 members)

- This is the first time (and as of 2015 the only time) six marimbas were used.
- Concert bass drums and gongs on the field (they are not included in this instrumentation). They were played by musicians on the field.
- Used six mallets in part of the marimba book.

6) The Cavaliers - "Immortal"

Alan Miller

- The marimbas move around on the field for most of the show, they come up into the stationary pit on the right side at one point in the show. In the stationary pit the timpani and synths were on the left, and the vibes were on the right of the front row. Glock/xylo behind to the right, drum set and rack to the left.

2 Synthesizers
Pedal glockenspiel
Xylophone
4 Vibraphones (4)
5 Marimbas (4.5)
Timpani
Rack
Drum set
Concert BD
Tam-tam

(16 members)

- The marimbas do “drill” on the field.
- At one point there are ten people on the field playing marimba, mainly splitting two mallet runs.

7) Phantom Regiment - “Swan Lake”

- Setup in two rows. Marimbas front and center with two vibes on the outside. Back row vibes are between front vibes and outside marimbas. Timpani are on the far right, synth far left. Glockenspiel is centered in the back row with a xylophone on right, and a vibe on left.

Synthesizer

Pedal glockenspiel

Xylophone

5 Vibraphones

5 Marimbas (3-4.6, 2-5)

Timpani

2 Concert BD

2 Tam-tams

(13 members)

8) Blue Knights - “That One Second”

Rod Kosterman taught this ensemble.

- Setup in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row outside of the front row vibes. Synth centered in the back row with the rack on the left, and the glock/xylo to the right. The timpani are in the back right corner.

Synthesizer

Bells

Xylophone

- Paired with the bells into one station

4 Vibraphones

5 Marimbas (3-4.5, 2-5)

Timpani

Rack

2 Concert BD

2 Tam-tams

(13 members)

9) Blue Stars - “Where the heart is”

Matt Hernandez taught this ensemble

- Modified “traditional Cavaliers setup,” the back row is set up s-r-x-ds-t-s-b.

2 Synthesizers

Bells

Xylophone

4 Vibraphones
4 Marimbas
Timpani
Drum set
Rack
2 Concert BD
2 Tam-tams
(13 members)

10) Boston Crusaders - "Animal Farm"

Andy Filipiak taught this ensemble

- "Traditional Cavaliers setup." The 5th vibrate and xylophone are splitting the center of the back row with the synth to the left.

Synthesizer

Bells

Xylophone

- Paired with the bells into one station.

5 Vibraphones
5 Marimbas (4.5)
Timpani
2 Concert BD
2 Tam-tams
(13 members)

11) Madison Scouts - "Time Trip"

Alex Kluttz taught this ensemble

- "Traditional Cavaliers setup" but in a staggered arc w/ no angles. Drum set and xylophone split the center of the back row with synths to the left, and rack to the right

2 Synthesizers

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

- DTX

4 Vibraphones
5 Marimbas
Rack
Drum set
2 Concert BD
2 Tam-tams
(14 members)

12) Crossmen - "Alma Gitana: A Gypsy Soul"

- "Traditional Cavaliers setup," with drum set and rack on the back right, xylophone and synths on the back left.

2 Synthesizers
Pedal glockenspiel
Xylophone
- Paired with the glockenspiel into one station
4 Vibraphones
4 Marimbas
Drum set
Rack
2 Concert BD
2 Tam-tams
(13 members)

2015

1) Blue Devils - "INK"

- Setup in two rows. Marimbas centered in the front row. Vibes on the outside of the front row, two more vibes in the back row outside of the front row vibes. Drum set centered in the back row, synth on the left and glock/xylo on the right. Timpani on the far left facing down the keyboard line.

Synthesizer
Pedal glockenspiel
Xylophone
- Paired with the glockenspiel into one station
4 Vibraphones
5 Marimbas
- "Alubells" mounted on one of the marimbas.
Timpani
Drum set
2 Concert BD
2 Tam-tams
(12 members)

2) Carolina Crown - "Inferno"

- Setup in two rows. Marimbas in the front row with 2 vibes on either side. Back row: r-s-s-g/x-t.

2 Synthesizers
Pedal glockenspiel
Xylophone
- Paired with the glockenspiel into one station
4 Vibraphones
5 Marimbas (4.5)
Timpani
Rack

2 Concert BD
2 Tam-tams
(14 members)

3) Bluecoats - "Kinetic Noise"

Tom Rarick

- Setup in two rows, with a slight arc. Marimbas and vibes in the front row, vibes on left marimbas on right. Drum set and synth split the center of the back row. Pedal glockenspiel in the back row between the vibes, xylophone in the back row between marimbas.

Synthesizer
Pedal glockenspiel
Xylophone
4 Vibraphones
4 Marimbas
Drum set
1 Concert BD
1 Tam-tam
(12 members)

4) The Cadets - "Ten"

Moyer

- Setup in two rows. Marimbas and vibes up front in a straight line, vibes on left, marimbas on right. Racks in the back corners. Glockenspiel and xylophone split the center of the back row with timpani to the right and synths to the left.

2 Synthesizers
Pedal glockenspiel
Xylophone
- Paired with the glockenspiel into one station
4 Vibraphones (4)
5 Marimbas (4.5)
Timpani
2 Racks
2 Concert BD
2 Tam-tams
(15 members)

5) Santa Clara Vanguard - "The Spark of Invention"

Rennick

- Setup in two rows. Marimbas in the front row, vibraphones in the back row with xylophone in the middle. Synth is on the front left, and timpani is on the front right.

Synthesizer
Xylophone

- Bells mounted on the xylophone
- DTX

5 Vibraphones
5 Marimbas
Timpani
2 Concert BD
2 Tam-tams
Chimes
(14 members)

6) Blue Knights - "Because"

Kevin Shah

- Setup in two rows. Marimbas are front and center, with a vibraphone on each end. The fifth vibe and the xylo/glock station split the middle of the back row, with a synth on the left, and drum set on the right.

Synthesizer

Pedal glockenspiel

Xylophone

- Paired with the glockenspiel into one station

5 Vibraphones

5 Marimbas

Drum set

2 Concert BD

2 Tam-tams

(13 members)

7) Phantom Regiment - "City of Light"

Rob Ferguson

- Modified "traditional Cavalier setup." The glock/xylo station and the synth split the center of the back row with a vibraphone on either side. Timpani on the far right.

Synthesizer

Pedal glockenspiel

Xylophone

- Paired with the glockenspiel into one station

6 Vibraphones

5 Marimbas

Timpani

Rack

2 Concert BD

2 Tam-tams

(14 members)

8) Madison Scouts

- "Traditional Cavaliers setup." Drum set and glockenspiel split the center of the back row, with rack on the right and synth on the left.

Synthesizer

Pedal glockenspiel

- Piccolo xylophone mounted on the glockenspiel

4 Vibraphones

4 Marimbas

Rack

Drum set

2 Concert BD

2 Tam-tams

(14 members)

9) The Cavaliers - "Game On"

Alan Miller

- "Traditional Cavaliers setup" with glock/xylo in the center of the back row, synths to the right, drum set and rack to the left.

2 Synthesizers

Pedal glockenspiel

Xylophone

- Paired with the glockenspiel into one station

4 Vibraphones (4)

5 Marimbas (4.5)

Timpani

Rack

Drum set

2 Concert BD

2 Tam-tams

(15 members)

10) Boston Crusaders - "Conquest"

Andy Filipiak taught this ensemble

- Setup in two rows, grouped by voice with vibes on the left of the front row and marimbas on the right of the front row. Glock/xylo is in the center of the front row. Timpani are in the center of the back row with drum set and synth on the right, and a rack and synth on the left.

2 Synthesizers

Bells

Xylophone

- Paired with the bells into one station

4 Vibraphones

- Bells mounted on one of the vibraphones

4 Marimbas (4.5)

Timpani
Rack
Drum set
1 Concert BD
2 Tam-tams
Chimes
(14 members)

11) Blue Stars - "Sideshow"

Matt Hernandez taught this ensemble

- "Traditional Cavaliers setup" with drum set in the center of the back row. Timpani and synth are on the right of the drum set. Glock/xylo, rack, and synth are to the left of the drum set.

2 Synthesizers
Bells
Xylophone
-Paired with the bells into one station
4 Vibraphones
4 Marimbas
Timpani
Drum set
Rack
-DTX
2 Concert BD
2 Tam-tams
(14 members)

12) Crossmen - "Above and Beyond"

Markworth

- This could be considered a "split pod" setup. Marimbas center of front row, vibes flanking this in pairs at a slight angle. The vibes are about 5 yards away from the marimbas. Drum set is centered in the back row behind the marimbas, with glockenspiel and rack to the right, and both synths to the left.

2 Synthesizers
Pedal glockenspiel
4 Vibraphones
4 Marimbas
- Piccolo xylophone mounted on the center marimba
Drum set
Rack
2 Concert BD
2 Tam-tams
(12 members)

Appendix B

James Campbell Interview

James Campbell was a longtime designer and instructor for the Cavaliers Drum and Bugle Corps. He was one of the first individuals to begin experimenting with stationary percussion instruments in 1978. He is a member of both the Drum Corps International and Bands of America Halls of Fame. Currently, he is the Director of Percussion Studies at the University of Kentucky.

The following interview took place on November 6, 2015. The interview took place through email correspondence.

LS: Would you describe the musical role of marching mallet-percussion and marching timpani sections in the late 70's and early 80's? (pre - "front ensemble").

JC: Pretty much the same musical role as they are now; melodic and harmonic.

LS: What were some challenges or limitations of writing for marching mallet-percussion and marching timpani?

JC: In the pre-pit era the challenges included the limitations of range (smaller for mallets) which placed most of the mallet keyboards in the same tessitura. Everything you wrote for them sounded like an "ice cream truck" going through your neighborhood.

The weight of carrying these instruments bordered on child abuse (so heavy to march/rehearse with).

The instruments had limited projection and had to always be staged in the front of the field.

LS: What led you to start experimenting with grounded percussion instruments?

JC: We only had one player audition for the timp/kbd section. I also started to score for more percussion colors outside of the normal marching percussion palette (chimes, crotales, shakers, suspended cymbals, gongs, congas, bongos, brake drums, concert bass drum, etc...). It seemed ridiculous to have to hang something on a marching member to get them to be used.

LS: What were you hoping to achieve by using grounded percussion instruments?

JC: More colors and wider ranges than the marching instruments allowed.

LS: According to the Scheffler article, the 1978 experiments with grounded percussion were "considered a failure." Why do you think this is the case?

JC: Maybe for the activity, but not for me. I think the additional cost, storage room, transportation, personnel needed to stage them at shows - all were problems to overcome. Most corps didn't want to bother.

LS: Why did you decide to "continue down the path to the pit" in '79?

JC: I was a college percussion teacher. These "pit" instruments were part of teaching and performing in my career. It was natural for me.

LS: How did the timpani writing change from the marching instruments to the grounded instruments?

JC: Not much until we moved away from the hand-crank timpani. When the use of balanced-action pedal timpani came into place, the instruments became melodic, almost virtuoso in nature when compared to their use in the standard symphonic literature.

LS: How did the mallet percussion writing change from the marching instruments to the grounded instruments?

JC: More use of 4-mallet scoring.

LS: How did the technical vocabulary and virtuosity of the keyboard players evolve throughout your time involved with drum corps?

JC: When full-range concert mallet instruments came into common practice, it attracted the collegiate music major who wasn't a rudimental drummer. They had a better outlet for their talents.

LS: What was/is driving people to use more, and more percussion instruments?

JC: Someone invents a new percussion instrument or sound effect everyday, both acoustic and electronic. There is so much variety in colors for melodic lines, musical arrival points, punctuation, programmatic world music, sound effects - it's limitless.

LS: Many consider the '85 Cavaliers show to be "legendary." Why do you think this is?

JC: The show design was programmatic, it told a story with one theme. All elements were coordinated in one "story board". This was not a new idea (Cavalier Circus Show), but all the musical material came from once source, more or less.

LS: In general, how has the front ensemble evolved during your time involved with drum corps?

JC: From none (when I started marching in 1963) to the Pandora's Box of today (consulting with the Boston Crusaders in 2015-16).

LS: What do you envision for the future of drum corps and the front ensemble?

JC: Much more use of sound design (electronic and acoustic).

LS: Are there other designers/instructors that stick out to you as "innovators" of the front ensemble?

JC: Fred Sanford and Ralph Hardimon (SCV), Kevin Lepper (Cavaliers pit instructor, asst. arranger during my time), Erik Johnson (Cavaliers and others), Tom Hannum (Crossmen, Star of Indiana, Cadets).

Appendix C

Erik Johnson Interview

Erik Johnson is the Founder and President of Innovative Percussion Inc. Following the departure of James Campbell, Mr. Johnson was a longtime designer and instructor for the Cavaliers Drum and Bugle Corps. He has had a considerable impact on the drum corps community through his front ensemble arranging approach.

The following interview took place by phone on December 9, 2015. The interview began at 3:00pm and ended at approximately 4:30pm.

LS: Will you briefly outline your involvement your involvement in drum corps?

EJ: I fell in love with drum corps when I was in high school. When I was in the 9th grade, it was considered junior high school where I was from. I wasn't in high school at the time but I had the opportunity to march in the high school band. The band director showed me a video tape of drum corps. I didn't know any thing about it, but I was immediately all about it.

The first drum corps show I ever attended was down in Cleveland, Tennessee in 1979. I also went to finals that year, and I just fell in love with it. I wanted to march drum corps as soon as I could. I went and auditioned for a drum corps when I was in junior high school, and I got a callback to the Memphis Blues Brass Band out in Memphis, Tennessee. But my band director wouldn't let me march drum corps and participate in the high school band, so I had to wait until after I graduated.

So I did, and after my high school graduation I moved to Memphis. I had several buddies, we had auditioned for the corps and gone to all of the winter camps. So we moved to Memphis and of course that corps folded folded mid-season. I was actually playing tenors then. I had auditioned for snare but for some reason I just wanted to play tenors. Playing tenors for Memphis that year, they had triples that year, tri-toms. The year before that they had quads.

The instructor that year was Mike Chiodo in the wintertime, who is now living back in Nashville. He had been the band director at Lake Park High School for thirty years. He moved back here and I have stayed in communication with him. But, he was doing the drumline. The drum corps ran out of money so he wasn't around during the summertime, and then the drum corps folded mid-season.

So the next year I auditioned at the Phantom Regiment. A bunch of my high school buddies and I drove up. Phantom had been very successful the year before; they had finished second in drums. I don't remember what place the corps finished in that year. Well, I got cut. I had auditioned on quads. Me, and everyone I rode with except for one guy, got cut. That one guy ended up playing bass drum, he was from Tellahoma.

But at the end of that audition Mike Mann, who was doing the percussion, came in and said "if there are any of you who are just wanting to march drum corps there is a new guy coming in over at the Cavaliers, his name is Jim Campbell." Of course, I wanted to march drum corps, so I went to the Cavaliers camp. I auditioned on snare drum, and I had never played in a serious traditional-grip snare line before. So I had a lot to learn; I

had a lot of practicing to do. That was the first year Bret Kuhn taught the Cavaliers. I made it by the skin of my teeth. Every camp I went to I thought I was going to get cut. When I moved up I still thought I was going to get cut. But I ended up making it. Bret was my snare tech, and that is where our relationship began.

So I marched Cavaliers in 1984 and 1985. I still had two years left, but I did not march my last two years because I went to the Leigh Stevens Summer Marimba Seminar. I was so into the marimba, I couldn't get enough of that. I would have aged out in '87, but I did the Stevens seminar for two summers. After that I went to North Texas and did my Master's there. It took me three years.

At the end of my Master's I told Bret Kuhn I was looking to get a job teaching the corps, teaching the Cavaliers. And he said "I'll tell you what, get a gig teaching a division two or three corps. Learn what to do and what not to do." That being said he helped me get that first gig. John Wooton was living in Iowa, and teaching at the University of Iowa. I think he was also working on his doctorate at the same time. There was a corps in Cedar Rapids, Iowa called the Emerald Knights. Bret recommended me to be the caption head of that line. You know I wasn't a real chop guy or anything like that, but he recommended me to be the caption head. I talked to John and told him I wasn't a chopper or anything. He said: "I know that, I understand that, I'm just looking for a musician to do it."

So I did that. The corps didn't have enough people that year, so they merged with another corps from the Quad Cities called the Quad City Knights, and the corps came out as The Knights. The merger split the next year and they changed the name from the Emerald Knights to the Nite Express.

I taught the Nite Express in '92, '93, and '94. I wrote in the '93, and '94 season. Mike McIntosh started teaching when we brought him on in '92. Mike was with me there in '92, '93, '94. Mike actually wrote the battery parts to the opener in '94. We were friends and colleagues.

Bret was able to get me on staff at the Cavaliers in 1995 when Brian Mason was a designer, writing music as the percussion arranger. In 95' they brought Bret back around to make an impact with the battery. Bret recommended they bring me in to help with the front ensemble, and I actually consulted with the bass drum line a little bit that year. So that was my first year with the Cavaliers. I became an official front ensemble technician in '96. I did that in '96 and '97.

In '97 Scott Kretzer started writing the percussion parts. I had lobbied to write the ballad, and they let me write the ballad. In 1998 I officially became the front ensemble arranger, and I did that from 1998 to 2005.

Bret Kuhn became the battery arranger in 1999, Bret and I wrote together until 2005. We both departed in 2005 and I consulted with several different corps for two years, some at the Bluecoats. What years did you march?

LS: I marched Bluecoats in 2009 and 2010. I started marching in 2004, I marched Carolina Gold then spent some time at Pioneer, Blue Stars, and the Colts, before Bluecoats.

EJ: Oh, ok, so your an alumni of the Colts then?

LS: Yes sir, I am.

EJ: Nice.

In 2006 I consulted with Bluecoats, and Spirit of JSU. In 2007 I consulted again with Bluecoats, Spirit, and Carolina Crown. I had the opportunity to come back to the Cavaliers as the front ensemble arranger in 2008. I had stayed in really good touch with Scott, and I'm really good friends with Jim Casella. They were looking for somebody to recreate what the Cavalier front ensemble had been, because those guys had come from a different school of thought. They wanted to me to be involved but I told them I wouldn't do it unless I was writing, because I wouldn't feel right changing Jim's music.

Well, Jim and I had a conversation about it; Jim had never written with anybody else. So it was quite flattering that he agreed to take on a writing partner. Especially someone to write the front ensemble because Jim is such an outstanding musician. It was a little bit of an intimidating scenario for sure, but Jim and I have always had a great relationship. You know, we are very different personalities but we always get along really well, and we always hit it off. We did in that situation as well.

The 2008 year, that was the *Samurai* year. It came back kind of fresh, and we had a really good year. We wrote together in 2008 and 2009. Jim stepped down after 2009 and that is when Mike McIntosh was hired. I wrote with Mike for one year in 2010. I consulted in 2011, and have consulted since then with Alan Miller.

Alan Miller started writing whenever I stepped down. I still do a little consulting with the Cavaliers. They'll probably have me in during all days to go through the music with Alan. I also look at scores for Ellis Hampton at the Boston Crusaders in the wintertime, and usually any time anybody else is interested in my looking at their scores. At this point, I don't do as much with drum corps other than some consultation. It's really the same thing with winter drum line as well.

LS: I'm interested in what you said before our interview. You made a statement that serious marimba players didn't want to march drum corps, they would rather be in a practice room with Leigh Howard Stevens. Would you talk about that, and elaborate?

EJ: Yeah, because it just wasn't developed enough at the time. I mean we had a guy at the Cavaliers, his name was Thomas Elliot, he was a really great marimba player from Louisiana. He did play a lot of very elaborate parts, but there was only one marimba spot. My reasoning was because I was very into solo marimba, because my undergraduate teacher was Mark Ford. Mark Ford himself had attended the University of North Texas, but had also spent one summer studying with Leigh Stevens when Leigh was teaching out of New York City.

I was really into solo marimba, and the approach that Leigh had to the instrument. I really wanted to focus on that. I didn't feel like marching drum corps was going to give me the experience that I personally was looking for. So you know, if I was going to spend all summer playing marimba I was going to do it from behind the instrument in a practice

room and not on the drum corps field. Again, it was not even in the same place then as it is now, at all.

LS: Right.

EJ: Please understand that it was a very different scenario back then.

LS: That is something I am really interested in. At what point did the musicality, and the virtuosity of the keyboard parts in drum corps start to transition and attract serious keyboard players?

EJ: You know, I really feel like that started to happen more at the end of the '90s. I wouldn't say that there weren't serious keyboard players marching drum corps throughout the '90s, or the late '80s and '90s. But again, it's the level of demand with the keyboard players. It wasn't there the way it was in the late '90s and early 2000s. It seemed like it really started advancing at a much more rapid speed than it had in the past. Again, I hadn't focused on it as much back then either. But really, the parts started to get more technical.

When I started teaching the Cavaliers in '95 there were three marimbas, three vibes, a rack, and a timpanist. That was it. I wanted to expand the ensemble, and we brought in a fourth marimba in '97. We had antiphonal marimbas that year. And this is another thing, I played with setups in the front ensemble for quite a bit. When I first got the Cavaliers they had a staggered approach. Meaning one marimba up, one marimba back, one marimba up, one vibe back, one vibraphone up, one vibe back. The marimbas on one side and vibraphones on the other.

And so, I wanted to try some different things. I wanted to try four marimbas, so we tried four marimbas. The instruments were still staggered. I also put a lot of real estate between each instrument. It was extremely difficult, I do remember that. We had two marimbas on the outside on either end, and three vibes in the middle. So it was: marimba-marimba, vibe-vibe-vibe, marimba-marimba. That was the first year of four marimbas. Then in '98 we added a fourth vibraphone, and we had antiphonal setups. We had side one and side two. That was the year that Alan Miller was the section leader of the front ensemble.

So if you look at side one, it was vibe-marimba-marimba-vibe; and then you look over at side two and it's the same thing. The middle marimba on each side had to play clean with the other marimba. They couldn't use their ears they had to use their eyes, so they had to watch. It went against every natural instinct. It was very difficult for them, but they did that. So it was one of those things, I learned the hard way what not to do by asking students to do things that were very difficult. But it was all about trying to create the right sound.

In '99 we had the timpani in the middle, on the field. Man, I really got in trouble with the visual staff about that. I cannot remember the exact keyboard setup we used in '99. But, I will tell you that in 2000 we adopted the ensemble setup that I would still

use today if I were still teaching. The marimbas all together with a vibe on either end, and then the other vibes staggered back.

The way I came up with that is I learned that the marimbas produce a shorter tone than the vibraphones. Therefore they do not work antiphonally because the sound of the instrument is so short that if the instruments are not close, the sound gets lost from one instrument to the next. You can't create that full sound. With all of the instruments together you can create this full marimba choir sound. Whereas vibraphones are different because of the sustain. They can be on either end of the ensemble and really work together antiphonally because of the sustain.

Now, if you ever listen to my ensembles one of the things you probably noticed was that there is always a lot of vibraphone sustain. I didn't have an indoor, contemporary pedaling approach or a traditional vibraphone pedaling approach at all. A lot of time it would sound terrible if you were right in front of it. But when you got out on the other side of the track or fifteen rows up in the second tier of the stadium, it worked. It worked really well, and it created this more lyrical sound to the front ensemble. It was very different from one choir to the next, meaning woods versus metals. But the marimbas defiantly had to be together. And the vibes, I liked having that antiphonal approach.

We added the pedal glockenspiel in 2003, and we weren't prepared for it. So we had a marimba player playing it a lot of the time, and the guy wasn't playing the marimba as much as he was playing the pedal glock. So we made a spot specifically for that. The one thing I did miss was having the vibraphone in the middle of the pit, to play in the ensemble with the marimba choir or when the marimba wasn't needed. We ended up adding a fifth vibraphone. But a lot of that had to do with what was also going on at Mystique. We added a fifth vibraphone at Mystique. We had been using the pedal glock, and we started using the xylophone in the center of the ensemble as well.

I never used a lot of xylophone in drum corps, because to me xylophone was a color instrument. Most of the time I used the xylophone I use it to double a marimba part, like on a 16th note passage or something like that. I would always use 903s and double it so that it didn't sound like xylophone. It sounded like you just turned up the treble a little bit on the marimba voice. Therefore at the Cavaliers, we always used one of those piccolo xylophones that attached to the instrument. So in 2008 the pedal glock had a xylophone attached to it, he was playing all of the color instruments.

The ensemble setup was always an experiment. I still remember when I can came up with that setup that we used in 2000. I was a Tennessee Titans football fan, I was watching the game and I had these pieces of paper out on the floor in front of my entertainment center. I would set them up like it was the front ensemble facing me when I was in the stands. I would look at it, and get up and move it. Keeping in mind that I knew the marimbas worked together as a choir better, and the vibraphones could have the possibility of working antiphonally, so I kept adjusting things until I came up with that setting. And I came up with that setup during a football game, at home.

I tried that same setting when I started teaching at Mystique. It made it a little more difficult to play clean as an ensemble because of the indoor limitations with all of the reverb. So we ended up moving the outer vibraphones in, and the outer vibraphones

became the ones that were an extension of the front marimba line. They had the other vibraphones in the back, closer in.

I actually tried the same thing at Cavaliers in 2004, the James Bond year, and I discovered quickly that it buried your antiphonal vibraphone sound. They played tighter, but it didn't have that full metal sound that I had enjoyed in the past. So I did that for one year, and then moved them right back out in 2005. It just did not work outside. It still works for indoor because you have reverb that works in your favor; and you also don't have a horn line behind you.

Now I'm sure you'd like me to talk about scoring; I'm sure you have some kind of direction you want to go with this.

LS: Yes. I am very interested in scoring. I am interested in your compositional approach within the group itself, but I'm also very interested in the role that the front ensemble played within the overall music ensemble of the drum corps.

EJ: Ok, I'm happy to answer some questions here.

LS: I'm interested in how this changed from when you first got involved, to now.

EJ: Well when I first started being involved, the front ensemble was a color section. It was a color section that would occasionally be the melodic leader as well, but just occasionally. Like the '97 Cavaliers show *Firebird*, the front ensemble had a lot of windows where they would take the musical lead. But when they weren't taking the musical lead, it was more color instruments or color behind the horn line.

It really started around 2000, with Richard Saucedo. Richard Saucedo started writing for the Cavaliers in 2000, he was writing and arranging for the brass. Richard would look at the front ensemble as a woodwind section, and he would sketch out front ensemble ideas. I could use those ideas, I could throw them out, or I could take them and embellish them. I did all of the above actually. The bottom line is it kind of created more of a woodwind approach for the front ensemble, as it relates to drum corps with out woodwinds. That system really worked well for us, having the front ensemble kind of act as the woodwind section.

One of the things that I started doing was I wanted things to be very transparent, and very easy to hear the front ensemble. Some folks would look at the front ensemble and say "well we have all of these keyboard instruments, let's have all these contrapuntal ideas going on. Let's create a really intricate counterpoint." But I didn't look at it that way because there are so many musical instruments on the field. I always look at it like: if you give the ear too much to digest then that's what's going to happen. You're not going to be able to digest it all musically. So I always scored more simplistically because I wanted the front ensemble to really have an impact, but I also wanted you to be able to really hear what they were doing. And then, it would make a bigger difference in regard to the big picture. The *Niagara Falls* show in 2000, that was one of those shows where they had

a lot of exposure. But in that ballad, I don't know if you ever listened to it. It is called *Waves*.

LS: I have.

EJ: The front ensemble, if they didn't play, you would really miss it. But if they played, it wouldn't slap you in the face. It added such a presence, it had such a blend to what was going on with the brass that it really created something that had a very full sound for the entire ensemble. You wouldn't notice the front ensemble; but if they weren't there you would really notice that they were not there.

LS: Would you say that 2000 was a keystone year, in your change of approach to writing?

EJ: Yes. We learned a lot in 2000 about blending the instruments. In regard to vibraphones if you go back and listen to that show, the vibraphones had a huge presence but they didn't have a lot of articulation. I would use the Engelman mallets, the 706s. I used to refer to those as the synthesizer mallets, where you push down the key on the synth and you hear the noise but you don't hear the attack. That was the vibraphone sound. You could play with those mallets really aggressively into the instrument and you would get this full sound, but you wouldn't hear it as articulation. You would just hear this sound that sounded like a synthesizer. Like: "where is that coming from? That sounds amplified." We did a lot of that during the *Waves* ballad.

But again, as far as the blending goes, there was a lot of blending. Go back and listen to those parts, one of the things that I had been going towards and I really, that year was a year where I really did a lot of this, I did not have a lot of different lines going on at one time. Most of the time it was two lines. Because again, I would have the wood choir working with the metal choir. Obviously the wood choir was playing more of the faster notes, with more articulation. The metals are not playing as many notes, because of their sustain. Occasionally you would have more lines going on. But again it really came back to clarity and transparency, and how well the front ensemble contributed to the big picture of the musical book.

Some people would come in and write front ensemble arrangements that would be very harmonically complex. Lane, when I talk about other ensembles I am not slamming other ensembles or anybody that did it, because there are some guys that were great at it.

LS: Right.

EJ: Neil Larrivee is great at it, I mean he would write so many different voices, and I know you have listened to his writing. Sandi Rennick, another one. You go back and listen to 2007 when they did *Verspertine Formations*. That was really complex and elaborate, and it worked really well. For an ensemble like that, to be scored like that, first off had to be extremely clean. That's one of the things that the Cadets are really good at; their ensembles play really clean. And they had to play clean, because otherwise those

parts won't work together. I'm not saying the Cavaliers play dirty. I'm just saying I have more of an approach of having the presence of sound.

I wanted the front ensemble to have this amplified sound before amplification existed. So we worked really hard at that with regard to mallets, technique, and scoring all together. The 2000 Cavaliers pit was one of those years, they sounded amplified. People didn't know how we were getting that much sound because the guys didn't look like they were playing hard. The guys were playing hard, but the scoring really helped out.

I would never have only one marimba voice by itself. I would have it doubled either an octave up or an octave down. It created this broad sound. An octave apart really works well together. Whereas if you try to do something two octaves apart, because of the double octave tuning, it just got lost. It never worked for me. Even if you had, you know, one octave, and then another marimba playing an octave higher, and another marimba playing an octave higher than that, it still did not work. If I wanted to double something I had the outer marimbas playing an octave lower and the inner marimbas playing an octave higher. If I wanted something to give it an extra boost I would double it with the xylophone.

I would take that approach a little bit with the vibraphones, however the lower register of the vibraphones get lost. So a lot of the time we ended up with the vibraphones playing in the same octave, but the extra boost was the pedal glock doubling it. Again with the pedal glock, and you know this from your experience, using the James Ross 903s.

LS: Yes.

EJ: If you use that mallet, and you double a vibraphone voice, it creates this really aggressive vibe sound. It doesn't create a glockenspiel sound on top of the vibe sound. Does that make sense?

LS: It does.

EJ: So that's the way a lot of those sounds came about. I had the glockenspiel being an extension of the vibraphones. And if I used the xylophone, it was an extension of the marimbas.

LS: How did your approach to writing change in 2004 with the incorporation of amplification?

EJ: I didn't change it at all. It did not change at all. As a matter of fact we used the amplification because it passed, and we wanted to continue to be trendy because the corps had so much success. It was a rule that we needed to be taking advantage of, and we needed to be seen using it. We used the microphones as a slight enhancement to what we were already doing. There was a section in 2003, in the ballad, do you remember the 2003 *Spin Cycle* show?

LS: Yes sir, I do.

EJ: In the ballad there was a melody that the keyboards played, the ballad started with that melody and it ended with the melody. At the end of it everything faded down, and then it was almost like you took the volume up. The keyboards got really loud for a resolution, then came back down.

I really took pride in the fact that we could have that sound, and not be amplified. So when amplification came about, we really didn't need it because we worked so hard to produce this sound without it. So we just used it for slight enhancement. And to be honest with you, even in things like the ballad you really didn't need the amplification. I won't say it wasn't on that year, but I don't think it was on during the ballad.

I know in other years like 2010, I don't think we even had the amplification on during the ballad because there was too much presence there. Too much front ensemble. Scott Koter was always adamant about the horn line and the front ensemble blending together. He wanted it to be loud, but he didn't want the front ensemble sticking out of context in the big musical picture.

LS: So this probably means that you didn't change your approach to the instruments when you started using amplification. Did you lighten up, or use more of a concert approach?

EJ: No, I did not and I will tell you why. To this day when I am teaching I want them to play aggressive. Even though they have microphones, they still have to have a certain amount of energy. Here is something that brass folks will argue and disagree with, I think every instrument is played differently marching on a drum corps field than it is in a concert hall. That doesn't mean that in a concert hall brass instruments don't play fortissimo, because they do. But, you listen to the volume of a horn line and everything is pretty darn aggressive. I'm not saying the approach technically is different, I'm just saying it is much more aggressive.

Of course with percussion, you know it is more aggressive. Look at a concert snare drum verses a marching snare drum, it's not hard to figure out. With the front ensemble you don't have the visual aspects that the battery percussion has or the horn line has because they are not moving. So how are they going to emotionally connect with the audience? If they play the way you play in your percussion ensemble at the university, they are not going to have much presence. They are not going to draw people to them at all. As a matter of fact, people are not even going to notice that they are there. That doesn't mean that they won't be heard, but you know a lot of it has to visually pull you in. I'll use the 2008 *Samurai* year as an example. Did you ever see that front ensemble?

LS: I love that show, yes. I am a huge fan of that year.

EJ: Well, thank you. It was hard not to watch that front ensemble. Now I'm not throwing myself a compliment here, I'm just saying that visually those guys were so aggressive

and they put so much into the performance that it was hard to take your eye off them. I mean you watch them, and how many times did you watch Phillip Morgan in that show?

LS: A lot.

EJ: I mean, you couldn't not watch Phil. Again, that's what we were looking for because that's what the rest of the drum corps has.

Now I know there was some criticism over me and the way I do it; having the guys get into it so much and using the body and the visual. But again, we are not in a concert hall playing heavy literature, playing low and playing off center on the bars the way you would. I always wanted everyone playing dead center on the bar because that gave to my ear, outside, the truest fundamental. It had the most volume, and the most body of sound. I wanted the guys playing aggressive, and Mystique did the same thing because we wanted to pull people in.

Now, that's one approach. And I know there are people who hate it. There are people who look at what I did and thought that I was out of control, because it was so different. But it was drum corps. I would not teach a university percussion ensemble the same way at all. As a matter of fact, I would have a big talk with the front ensemble at the end of the season about: "ok, you're going back to your universities now and you have to tone down your level, your volume, and your aggression. Because otherwise you're potentially going to end up damaging some instruments. Also I don't want to get a call from your studio teacher criticizing what we are doing, and not sending us any more students. So you have to tone it down." Because the front ensemble was that different.

When I first started teaching drum corps I thought that you should have the same approach indoor versus outdoor. I was a purist. The more I taught drum corps the more I realized that this doesn't work. So I really started pushing the boundaries and playing aggressive, getting the body involved, and over exaggerating things emotionally to get that emotion transferred to the audience.

LS: Did your writing change at all once we started incorporating electronic instruments in 2009?

EJ: No, it did not. To me, and I'm cautious about saying this because it could offend some people, to me electronics need to be an effect. It doesn't need to be the focus; it doesn't need to be something that becomes dominate over the melody. It's just added effect, it's electronically designed effect. That's what its there for. Not everybody feels this way, and some people would argue this with me. Again, I'm a purist. I'm not a guy that's technologically minded. I'm not a guy that's into the electronics. I don't have a problem with it, but I don't know anything about it.

I'm more of an acoustic instrument writer, a mallet player. I want those voices to be heard. That's one of the things I really enjoyed about the *Samurai* year. Jim Casella and I worked really hard to have all of these authentic instruments, and all of these different colors created acoustically without the use of electronics. You see that a little bit

in drum corps now but you don't see it as much as you use to. To me that was exciting. How could we create some colors that no one has created using musical instruments?

Electronics are something that can enhance the show. I'll use *Mystique* as an example, the *Mantra* show. In that show the electronics enhanced it so much. You look at that ballad, towards the end of that ballad, some of the things that Tony Nunez did there were genius. But again, it's effect. There was a part at the end where the voice was bending down. It was so effective, and it gave me chills when I would listen to it. If you heard it without the electronics, it would be good. I should say it would be enjoyable. But electronics really brought it all together. So electronics defiantly has its place, as long as it's done properly, and is blended well with the musical book.

LS: So, I asked you about the technical approach changing throughout the addition of amplification, and you said it was the same. How about the virtuosity of the players? I feel like there was a pretty clear development in the ability level, and what the performers were able to execute. It seemed like the writing got a lot more complex, and a lot more demanding.

EJ: I agree with that. And again, you saw traces of that in the late '90s. But in my opinion it really started coming to life in the 2000s.

I always wanted to push the guys to play very virtuosically. Even back as early as 2000. Well, I should say that there were times even before that. I know in the '97 show I wrote a lot of one-handed rolls. In *Firebird* I don't remember what we played for the ballad. We used a lot of one handed rolls, and always really continued to push the technical aspects of it in '98 and '99. But in 2000 we started coming to life even more. But I go back and listen to some of my writing from the past, thinking of the 2001 show. The 2001 pit did a clinic at PASIC that year, we were able to get them all back together. I go back and listen to that show, and I don't like that book. It wasn't very technically demanding; it wasn't musically complex. I guess for the time it worked ok.

I feel like after that, I always pushed to write more complicated parts. I wanted the front ensemble to have the technical demand that was expected from all the other instruments on the field. I was really pushing the front ensemble in winter drum line because there was this emphasis on the battery sections to have all of this exposure, and to play all of these licks. The only expectation of the front ensemble was the play fast sixteenth notes. And I'm like: "well that's not difficult!" You know, anybody could do that.

That's when I really wanted front ensembles to start playing much more technically. I wanted the expectation to be there, looking for the virtuosity in the front ensemble in indoor. I had the same approach to outdoor, but indoor you are able to write more virtuosically because there is not a horn line. With regard to drum corps you can only take it so far because of the horn line. Otherwise it is just wasted effort.

LS: You wrote some books where everyone was playing with four mallets, for pretty much the whole show didn't you?

EJ: Oh yeah.

LS: When did you start doing that? And what was your thought process behind doing that?

EJ: That was really in 2009, because in 2008 there were still some two mallets licks in there. I basically wanted to have the approach that if somebody needed to put four mallets down to play something with two mallets like fast sixteenth notes, well I think you should be able to do that while holding four. Let's not go through the inconvenience of having to make time for setting the mallets down, let's just hold on to them and play it. We always used to work on the "two-three exercises" like the "cowbell exercise" and things like that. You know what I'm talking about right?

LS: The "cowbell game?" Yes.

EJ: Yes, doing things like that to develop those 2-3 inner mallet technique. I just wasn't as big of a fan of having them put down two mallets. So I just had them perform where we wouldn't do it. Most of our exercises were geared around four mallets. You know, it didn't make sense to have two different techniques like that. Let's just hold four mallets and have one technique. It also has a more professional look about it, it has a higher level look about it.

LS: Ok.

EJ: Again, that is a superficial statement. But to me, it is what it is.

LS: No, that is your opinion and I appreciate your honesty.

Going back a little bit, it seems like in the '80s and in the '90s there was this trend in general, not speaking specifically about any group, where people were moving around to different instruments in the show. There seemed to be this idea of a "multi-percussionist" in the front ensemble. I noticed in a lot of the Cavalier groups in the mid to late '90s, people were staying at one station. They wouldn't move around. Can you talk about that?

EJ: That actually started at the Cavaliers in the late '80s, going on into the early '90s. Early on the Cavaliers had what they called the "pod concept," where each percussionist had a multi setup. The vibraphone player, he didn't just have a vibraphone. He had a vibraphone, a glockenspiel, suspended cymbals, wood blocks... he had a multi-percussion setup. So it wasn't a marimba or vibe spot, it was a multi-percussion spot. They all had it, they called each one of those a "pod." That way nobody had to move.

Now other drum corps are still having guys dropping mallets and running to the other side to play this and that. Now there is nothing wrong with that. Jim Campbell,

Kevin Lepper, Brian Mason, the guys who were at the Cavaliers at the time were taking the approach of having a multi setup and the guys just not running around. It was a much more professional look.

When I got there in '95 Brian Mason was arranging. He arranged '93, '94, '95 and that was still going on. I had that same concept for a number of years, but I stopped using it because I wanted the guys to focus more on keyboard parts. I didn't want them playing a little bit of marimba, then playing some wood blocks, then the cymbal, then some brake drum. I wanted them to play more marimba. For a while I didn't have any rack percussionists because I had it all spread out in the setup.

But eventually Scott Koter pushed me to have a rack percussionist to cover concert bass drum parts, suspended cymbal parts, things like that. Once we tried it I was like, "why didn't we do this earlier?" Now I didn't have to take guys off keyboard parts to cover concert bass drum notes. Again, I just wanted the guys playing as much keyboard as possible, letting all of the colors come from the rack percussionists. Of course at Mystique you had two rack players on each side. That really made things a lot easier. That was one thing that was great about Mystique. I never had to pull guys off keyboard parts for anything, because of all the rack players.

LS: That makes a lot of sense.

This is random but I am flipping through my notes here. I noticed in the 1997 DVD that there were big pieces of plexiglass on the ground underneath the marimbas. Was this an effort to project the sound?

EJ: Yes it was. I had tried something different that year. We got the same covering used to cover a concert bass drum or something like. You know, that plastic covering?

LS: Yes.

EJ: We got some of that, and we devised a system where it came down from the back of the marimba and curved to the front. We called them "marimba projectors." We made, I think two of those mid season. It actually worked to project it, but it was such a pain to do. They were such a pain to put on and take off. The week of finals I had the idea of getting plexiglass and putting it under the instruments to make them project better.

I remember one of the board members at the time asked me about it. He goes "is this really going to make a difference?" The corps was sitting about sixth or seventh place in '97. He goes "we're going to spend all of this money, is this really going to make any difference?"

I said: "look, my job is to make these guys sound as good as they possibly can. I'm not looking at anything other than any little edge I can get to make these guys sound great." So we tried that, putting the plexiglass on the ground.

Another thing we did was lean the instruments forward a little bit. We had the back wheels blocked up so the instrument would lean forward to expose the resonator opening to the audience a little more. With plexiglass under the instrument, well, the sound doesn't come out of the bottom of the instrument. So it doesn't really work that

way. But if you compare a marimba on a hard wood floor versus marimba on a carpet, the hard wood floor is going to sound better. Why? Because the sound bounces around more. So I was trying to create a hard surface for sound to bounce off of, even though the sound isn't coming out of the bottom of the instrument. I was also trying to expose the resonator opening to the audience a little more by leaning the instruments forward a little bit.

Now, this made it very difficult for the guys to play. We did that in '97, I think we did it again in '98. The guys really put up with a lot of experimentation to try and get that bigger, fuller sound. We worked to project more so the front ensemble had more contribution to the musical package.

Many front ensembles didn't have that kind of contribution. The mallet players are down there hacking away and you don't hear any of it. What's the point? Why are we doing this? That's busy work in my opinion. If they are not contributing musically its a waste of energy. So we did everything that we could to make sure they contributed musically.

LS: Starting when they established the "pit box" in '82, there was a huge stretch of time where everyone was experimenting. Is there a time or a year that stands out in your mind, not just in your groups, but when everyone seemed to be standardized?

EJ: Standardized with more of what the front ensemble is these days?

LS: Or in general. Not necessarily with how it is now. Was there a point where most of the groups were doing similar things? With similar instrumentations, and similar approaches?

EJ: Well, I think its been that way a lot depending on the particular era that your in. If you think of drum corps in the late '80s and early '90s, a lot of the drum corps are doing the same thing. They would arc it up in the front and stagger the instruments (marimba-vive-marimba-vibe). Everybody would have a suspended cymbal stand on the front of their instrument. They would write very contrapuntally. But again, the keyboard sounds were very thin. There were not outdoor mallets.

The first serious outdoor mallets were the Innovative Percussion Field Series mallets. Those were the first ones. Years ago Malletech had the Stadium Series. Back when I was studying with Leigh, they were working on those and testing them with the Garfield Cadets, which were the Cadets at the time. But it never really caught on, so people were using light mallets and getting these real thin sounds.

When I started Innovative Percussion I was looking to make a better solo marimba mallet. I always used to practice with the kaki concerto mallets and put gobs of rubber bands under the heads, so it would work on your technique. I was used to heavy mallets. So when I made some of the first prototypes for Innovative they were too heavy. I loved them, but everybody else thought they were too heavy. Those actually became the Field Series.

One of Marc Ford's former students, his name was Scott Sells, was teaching Vanguard's front ensemble in '91, '92, and '93. I can't remember if he was there in '94 or not. But anyway he got ahold of those mallets and thought they were great. I was like "I don't know what you're talking about." He said "these are really great for drum corps because they have the weight to create this larger sound."

And that's where that whole thing started. The first mallets were 150s, 250s, and 350s. And then also around that time the 100, 200, 300, 400 mallets, our solo series were made. It was just a lighter version of what the field mallets were. Of course those mallets went through some transition with different yarns and such.

If you look at what was going on in the late '80s and early '90s a lot of the groups were doing the same type thing. If you look at what was going on in the late '90s there was a serious transition going on, people figuring things out. I just had my way of doing it. In '96 when I was teaching the pit I remember Brian Mason giving me the opportunity to do whatever I wanted to do. When I was there during all-days I took the ball and I ran with it. I changed a lot of parts and I tried a lot of things. I wanted the guys playing more aggressive, and people started responding to it. When I saw their reaction to it I was like: "well, we can do more." So we kept changing the approach, playing more aggressively, and performing with more aggression.

I also continued to develop more mallets. More mallets suited for the activity that give you this larger sound. The technique we were using was a very "drum corps" technique where they were really playing into the bar, but they didn't look like it. But if you only knew how hard the guys were playing. I mean you know; you have been there.

LS: I do.

EJ: You play hard, but you don't want it to look like your playing hard. That's one of the things we strived to do. And I really think that the front ensemble approach, people started noticing the way we were doing it. People also started expanding their front ensembles more.

One school of thought was that when amplification came along: "well, with amplification you don't need all of these keyboards. You can have one marimba and one vibraphone and just amplify them." I thought: "there is no way I'm going to do that." I kept expanding it. It doesn't make sense to make it smaller. It doesn't have the same effect when you have one or two marimbas verses when you have five marimbas throwing down in unison. People would ask "why do you have everyone playing the same part?" Well, why do you have ten snare drummers playing the same part? Because its effective!

LS: Right.

EJ: It "wows" you. If you walk right in front of it, it intimidates the hell out of you. You have to step back, going wow this is intense. That was always one of the things about Mystique in the parking lot at WGI, people would stand right in front of it because they were just blown away. They were blown away by how aggressive it could be. It was fun to watch.

Lane, I don't usually talk about myself or the things I have done with the front ensemble. I never want to sound arrogant, or to come across as cocky. I do not think that I am better than everyone else.

LS: Yes sir, I understand. You have contributed in a huge way to this activity. I appreciate you speaking openly about your experiences, and sharing with me.

EJ: Also, I want to tell you that when we get off the phone, there is a lot going on here, but when you realize that there are things we didn't talk about, I'm happy for us to talk again. I'm happy to help you out in any way that I can.

LS: Thank you.

EJ: I think this is only going to be good for the front ensemble. You are going to create something that doesn't exist. It's kind of a documentary of the front ensemble its self. By the way, is this the type of information that you are looking for from me?

LS: It is. I am really just curious about what ever you have to say about this history. This is something that I was clearly not around for the vast majority of. I am not even sure if I am diving in the right directions, or asking the right questions.

EJ: You asked questions that got me talking. Telling you what I know, and telling you about my experience.

So much of what I did was trial and error. I never wanted people watching me while I was teaching the front ensemble. Because there was never any method to the madness. People would always say: "Why don't you try this? Why don't you try that?" I didn't need anybody doing that, I'll get to it. I may not hear what you're hearing, when you hear it.

I always listen for the quality of sound first. I never listen to vertical alignment. The techs, that's all they would listen for was vertical alignment. They didn't listen to the quality of sound and how it blended. I always listen to that first. I always wanted a really dark, warm sound, that blended. I didn't want a sound that sounded like you were beating the snot out of instrument. Sorry for the technical term.

I wanted a beautiful, rich, dark sound out of everything we did. For years at the Cavaliers we used to play *Venus*, from *The Planets*. We used the big Engleman 701s and 706s. It had this big, dark, full sound. I wanted them to create the darkest tone they could with everything they played. Even if it was a big brass 909 on the glockenspiel, I wanted them thinking dark. And they always tried to achieve that no matter what they were doing.

Not everybody had that approach. They thought "I can't hear the keyboards, get some harder mallets." I'm like, don't do that. Figure out a way to score it so that it can be heard and not create a more harsh tone. Because if you're hearing it because of the harsh

tone, well that's not really what anybody wants to hear. You go back and listen to the keyboards from back in the '70s when they were on carriers, it all sounded like harsh.

LS: It did.

EJ: They were all playing the two-step flexible mallets on bells, marimbas, vibraphones, xylophones, it was harsh.

LS: It seemed like they were mostly doubling brass lines. And then playing ragtime parts whenever there was an opportunity, a space in the sound.

EJ: Yeah, exactly.

LS: I have a few more questions that are somewhat off topic. Do you feel like there has been any sort of development or change in the experience level or the quality of the instructors?

EJ: Yes, absolutely. In the earlier years there were not as many music majors. Now in the front ensemble of the upper level drum corps, it is typically hard to make it if you're not a music major. There are musicians and music educators teaching at every level of drum corps. Not level, but teaching brass, battery, and front ensemble. It is music education. It's not like the old days where you had these drum corps hacks, and that's all they did. Now people have to be educated and they need to have some kind of music education background, because there is such a strong educational environment in drum corps that wasn't there years ago.

The level of student in the activity, the level of instructor in the activity, everything in the activity is on a higher level. Everything is on a higher level now, say compared to when I marched. I'm not slamming on my situation; it just wasn't the same as it is now. Back then you wouldn't have a guy teaching the drum corps like the Colts who had his doctorate. Make sense?

LS: It does.

EJ: It has become an educated activity. And there is a much higher level of education there.

LS: What do you think has ultimately driven the development of the front ensemble?

EJ: What has driven the development? I think a lot of it has to do with stronger players coming out of the universities. Stronger players who are percussion majors are going to these drum corps. Better players in the drum corps offers the arrangers more possibilities musically. I know that's the way I felt. I always used to tell people that I have the best

players who can play anything, so I can write anything I want to. That wasn't always the case in drum corps.

The ability level of the players now has to play into the whole educational system. What I played on my senior recital, high school students are playing now. What I played on a graduate recital, high school students are playing now. You know, it's a whole different level now than what it used to be.

I look at some of these high school students that are playing in the PAS competition, and what they are playing. Like this one kid from Texas played this Pius Cheung piece, and he played it amazingly. Out of high school. How are they doing that? The whole educational system has gotten better; the expectations have gotten higher. It is also due to the internet, Youtube, things like that, people know more than they used to. They learn about it at a younger age, and the expectation to do that at a younger age is now in place.

That has driven the front ensemble because these people will go to drum corps, and they create opportunities because they give the writers more to work with. The writers can add more complexity to their writing, and the students really allowed that.

I can use *Mystique* as an example. When I started writing in 2003, the level was pretty low. By the time I finished, I couldn't write anything that was too hard. They could play anything that I could imagine or come up with. That was defiantly not the case when I started there.

LS: What about the future? What do you see for the future of the front ensemble?

EJ: I don't know...

Appendix D

Matthew Ryan Kilgore Interview

Matthew Ryan Kilgore is currently the Ensemble Music Coordinator for the Bluecoats Drum and Bugle Corps. As a performer he was a member of the Bluecoats in the late 1990s. Mr. Kilgore holds music degrees from Rutgers University and Northwestern University. Currently, he teaches percussion at Capital University and is pursuing his Doctor of Musical Arts Degree from the University of North Texas.

The following interview took place on December 15, 2015 in Columbus, Ohio. The interview began at 4:00pm and ended at approximately 6:00pm.

LS: Will you briefly outline your background in music, and your involvement in drum corps?

MRK: I started as a piano player at the age of three, and I continued to study piano through middle school and the beginning of high school. As I transitioned into high school I started playing percussion in the band, 7th, 8th, and 9th grade.

In the 9th grade I got into marching band at the high school. At the time there were a bunch of high school students, upperclassmen, juniors and seniors, who were involved with the Kiwanis Cavaliers at time. They would drive up there to go to camps, and had just come back from marching at the end of the summer.

There was a pretty strong culture of drum corps in my high school when I was coming into the 9th grade. There were a lot of people who were excited about marching band, and the marching activity. So I got into it to, it seemed like a good thing to do. I enjoyed playing music, and really liked playing marimba specifically.

I did two years of drum corps, after my freshman year and sophomore year. I marched Kiwanis Cavaliers in '98 and Bluecoats in '99. Both years I played in the front ensemble. I also marched, either in 2000 or 2001, at Spirit Youth Performing Ensemble in Canada.

So, I was pretty into marching band at that point. After my sophomore year I was introduced to She-e Wu, who became my private teacher through my undergraduate degree. She told me that I should stop marching drum corps. So, I stopped doing drum corps. She said that it was bad for my technique and my musicianship, and that I didn't need to do it anymore. So I listened to her and stopped doing drum corps after the '99 year of Bluecoats.

I did not return to drum corps until after my Master's degree from Northwestern, with Professor Burritt. When I got done with my Master's degree I had to prove to myself that I was going to make a living in music, and didn't need to go into food service or get a desk job or something. I had to be sure that I was going to be able to make this a living.

I moved back to Columbus, Ohio and started freelancing all over the place. Working high schools, I realized that I was going to be teaching marching band. So the summer after my Master's degree I went out to the Bluecoats for six days on tour. One of my good friends Allen Justus was teaching there. I went out, and observed front ensemble technique blocks, show music rehearsals, percussion ensemble and full ensemble

rehearsals. I also peeked around the battery, the horn line, and the guard, just to see what was going on.

I took that as an intro into what drum corps had become after the two years that I marched. When I came back to Columbus I started teaching marching bands. I had a good friend, Tim Jackson, call me up and ask me if I wanted to teach Rhythm X. I said yes. So I started teaching there, I did a few camps for them. Their section leader at the time was Matt Hahn. He recommended me for the position at Bluecoats in 2008, after another one of their techs departed. So I started, I went out for an audition to teach the Bluecoats in 2008. They liked me I guess, and they asked me to join the staff.

I have been with the Bluecoats ever since then, 2008 to present. I was a front ensemble tech from 2008 to 2013. My position expanded in 2014 and 2015 to become the music ensemble coordinator, which is basically the position of managing the score. I keep track of score updates, relay information to the music staff, plan ensemble rehearsals, and make sure that the full musical ensemble is getting as good as it can as fast as it can. Making sure that everything is balanced and blended.

LS: Great, thank you. You brought up an interesting point about what the front ensemble was when you were marching, and when you started teaching (gap of time from 2000-2008). Can you elaborate on that? What was it like when you were marching, and what was it like when you started teaching? What were the main differences?

MRK: Well, there were a lot of differences. From the playing side of the activity, I had two very different experiences in my two years of marching. My first year of marching was at the Kiwanis Cavaliers, I remember my pit instructor's name was Jay, I do not remember Jay's last name. He was university educated, from a university in Canada. So he was straight out of drum corps but also straight out of music school.

That's where I learned how to play with the Stevens' technique. We had a bunch of great exercises to move around the keyboard, get our hands faster, get better at rhythm, all that kind of stuff. At the age fourteen when I was doing it, I didn't feel like there was really much of a technique that we talked about.

The technique was achieving the exercises, and the technique was achieving the show. So if your hands needed to move faster we did exercises that got your hands faster. But I don't remember a specific thing about how to hold the sticks, or what to do with your hands, sticks, grip, or anything like that. I didn't have any sort of a technical education from that first year.

The second year I remember that the primary focus of the technique was to play really loud, and really fast. We sort of took a meathead approach to it, well maybe not meathead, but it was going through the brick wall with a hammer.

LS: Barbaric?

MRK: Yes, it was barbaric. It was just faster. It was just louder. I remember Chris Young was my pit tech at Bluecoats. He would have a block, and he would just play eights with us for 6-3-2-1, whatever exercise it was, and we would just go as fast as his right hand

could go. No matter how you did it, squeeze, tension. They would say “relax,” but that didn't mean anything. You just never broke and you kept playing.

LS: So there was really no discussion of mechanics?

MRK: I think I remember from the first camp that it was like “30-30-30.” I remember those numbers being like: 30 percent arm, 30 percent wrist, 30 percent fingers. It was balanced between the whole arm, all of it was involved. If you were playing slow, you used more arm, if you were playing fast you used more wrist. But I think 30-30-30 is kind of what we said.

It was not the old school “you only use wrist no matter what.” Arm was involved. I think I remember it being referenced to mainly in terms of getting loud enough. Just to play loud. And to play as loud as you needed to play, you needed to use arm.

LS: What about the music that was being played? The specific keyboard parts, were they more advanced or less advanced than the parts you are teaching now? Would you talk about that comparison? What kind of vocabulary were they playing?

MRK: When I marched it was almost exclusively two mallets. If there was four mallets, it was basic. The writing then compared to today is just not comparable. I remember in '99 I played glock, so I am only speaking from watching other players like the marimbas and the vibraphones. I think we used Burton grip for the vibes, and Stevens on marimba. The marimba stuff was a lot more, for the time, soloistic. It was not just single inside mallet runs. The music was written by somebody who was a marimba player, and knew how to hold four mallets. But both years that I marched, it was mostly two mallet stuff. Like ninety percent two mallet stuff.

LS: And then in 2008, was there a lot of four mallet?

MRK: In 2008 there was a significantly more four mallet playing.

LS: What had changed about the approach to the instrument, from when you marched to 2008?

MRK: The concern with proper grip; what Stevens defined in Method of Movement as the proper grip, as well as a significantly decreased amount of arm in the stroke. I would say in 2008, in terms of technique, we were probably like five to ten percent arm and the rest was wrist. Also, fingers were not talked about at all anymore when I got back to Bluecoats in 2008. Fingers were out of the equation. So, a lot more wrist.

Actually, everything that I had learned through my undergraduate program, and going to the Stevens' Seminar, all of those ideals that I had learned in terms of technique and movement were now common place in terms of teaching Bluecoats in 2008.

When I marched in '99, I had never heard of shifting. I never heard anything about shifting while I was there. There were no Method of Movement concepts that I

remember from '98 or '99 being applied. In 2008 it was almost straight from the textbook. So that had totally taken over.

LS: And that was probably the primary motivating factor behind She-e Wu telling you that you shouldn't march drum corps if you wanted to be a serious marimba player?

MRK: Yeah, I think that had a lot to do with it. Although, I have had lessons with her since I got back into drum corps and not even from a technical perspective but from a musical perspective, she would still mention bad habits that I was making musically based on the musical lessons I had in my undergrad versus how I played after I had been teaching drum corps. There are things you can do as a concert marimbist that are not prescribed sonic ideals for drum corps. For example, slurring from one note to another, you don't do that in drum corps. There are no slurs.

LS: Why?

MRK: Because there's no articulation that I can tell. There's an ideal in drum corps, in all of drum corps, that the front of the note should be as much like a snare drum as possible. A marching snare drum. As far as vertical alignment, a lot of people like to hear clarity with a crispness on the left side of the note. Which is why I think articulation has become something that we strive for in the front ensemble. More articulation makes it readable and clean, but it also eliminates a significant number of ways that the marimba can sound.

LS: That makes a lot of sense. We've talked about the instrumentation some. Can you talk about the musical role of the front ensemble when you were marching in contrast to when you started teaching?

MRK: Sure. In '98 we did a Gershwin show, so it was a lot of music that I am so very familiar with. Basically the front ensemble played the string lines, all the time. So we were always emulating the strings in the orchestral writing. We played some runs and ostinatos, but it was very much a different instrument that wasn't a xylophone, marimba or a vibe. It was a transcription being played on a marimba, xylophone, or vibraphone.

I think it was similar in '99 at Bluecoats when we played Chick Corea and we played the piano lines. The front ensemble was the piano of the Chick Corea music, so a lot of really cool stuff, but not stuff that was written for marimba. We were playing other people's music in those years.

In '99 it was kind of a little bit of both because we played *On the Waterfront*. We were playing violin licks from *On the Waterfront*, but it was no longer the composition that Bernstein did. In '99 the orchestration of *On the Waterfront* that the Bluecoats played, the lines and the riffs that the front ensemble played were not transcribed riffs straight from the original composition. They had been significantly modified as part of the entire composition that drum corps were now putting out. It was a different type of composition where you were now creating multiple tunes put together going for a bigger

conceptual goal. You were no longer taking straight from someone else's music. They had been transformed.

In 2008 we played a lot more four mallets, but more four mallets written by people who knew what should be written for marimba. And they were trying to show off. Really, trying to have a moment in the show where you were trying to show off the technique of four mallet marimba playing. That was definitely not something that was incorporated into the competitive design in '98 or '99.

LS: Do you think the fact that keyboard instruments are amplified now has changed the way music is written for them?

MRK: Yes. Definitely. A lot of groups have taken different paths in terms of how they responded to the use of amplification. Some groups still play loud. In my mind, some groups still play like they would have in '99, maybe a little bit softer or with slightly softer mallets. Especially thinking about 2008.

LS: What effect did amplification have on the way pit books are written? I think they can now carry a more prominent roll and they could use more vocabulary because...

MRK: Because you can play softer.

LS: I believe that with amplification you can play softer, you can play more musically. I feel like it opened up a huge avenue for more serious marimba playing because you can play it more like a marimba, and less like what you were saying before. Less violin parts, wind parts, clarinet parts, and more stuff written specifically for marimba. Do you think that was because they were amplified?

MRK: I think the amplification had something to do with it, but I think the reason the writing changed more than that was the people that were involved. Like having an Erik Johnson start writing for our front ensemble, who started to just look at the front ensemble as a legitimate musical device that has enough colors and can be orchestrated to manage an entire moment. I think that has been the development of percussion being more involved in the wind band, in the percussion ensemble being more prevalent, and with the Percussive Arts Society doing what it's doing.

LS: So this is something more broad spectrum, percussion is growing?

MRK: Yeah. I think drum corps reacted to a general trend of where percussion was going. In 2001 the Cavies front ensemble really started to change their orchestrational model to be more ostinato based. Michael Gaines and the visual stuff he was doing was really influential, because they would write original compositions based on the needs of the drill. Because of that, the front ensemble became a really easy medium to manage a certain number of counts. And I think it was less before amplification, it's the Michael Gaines Cavaliers thing that happened in 2001.

LS: It was more about show design.

MRK: It was more about show design. Instead of just putting three tunes that were cool together, and wrapping them up with a random name that was the title of one piece or... "Caravan" as everything together as, you know, music that's Arabian, flat 2's, flat 6's, that kind of stuff. But then the programs became more pageantry-ish, less designed by the people that were writing the music and more designed by the people that were writing the visual. Or maybe it just got closer to 50/50.

LS: They were thinking about it more holistically.

MRK: Yeah. And by amplifying the front ensemble I think it opened up a wider palate of what is technically possible, because you can use harder mallets and play softer and still get good articulation.

LS: Do you think it changed the kind of vocabulary that people were writing, people were demanding?

MRK: Yes. Definitely. I think faster alternating strokes became more prevalent, and lateral strokes became more prevalent.

LS: In 2009 electronics were allowed. It was something that had been happening for a while in indoor and in marching band. What effect did the incorporation of electronic instruments have on drum corps?

I am curious about this on a few different levels: big picture show design, smaller picture music ensemble (composition and orchestration), and then even smaller picture of within the front ensemble. Did it effect the instrumentation in anyway? What new instruments were introduced? What kind of new colors were possible? Past that, I'm curious about any specific challenges.

MRK: Let's get into the micro first. I think in the beginning, it kind of works chronologically. Like when you go from 2008 to 2009, the first thing that changed was the addition of the electronics, which was relatively small in scope. At the Bluecoats it was run by one person, Bobby Trick, who had been running the electronics as a performer for Rhythm X for a few years before. We knew he was good with computers and synthesizers, and we knew that he was a pretty decent piano player. So we recruited him to march Bluecoats.

In terms of what was scored that year, it was not the "pad" heavy synth parts that exist today. It was not loud, sub-bass. It was more coloration of a pre-existing line. And I think that is really where the use of electronics started. It was to take either a vibe line or a marimba line in the front ensemble music and enhance it. It made the line a little bit louder, a little more present. Maybe a little bit of bass notes with the tubas. From my very first year there we had Bob Higgins. Remember Bob?

LS: Yes.

MRK: Bob Higgins is an awesome trombone player, bass trombone player from the Cleveland area. He was working with the low brass. I remember the first ensemble rehearsal that we had the speakers, I didn't know anything about them at the time. He was pointing to the ohms, and the output ratio on the graph. He was talking about where the tuba's sound spectrum is in terms of Hertz, and where the speaker spectrum is in terms of Hertz. I was like: wow, I need to step up my game in terms of what's going on.

I think we only did a little bit of tuba doubling. We mainly did coloration, reinforcement of front ensemble lines. Or, a piano part. So it was coloration at the beginning, it was supplemental. It was defiantly not an independent voice, unless it was a piano moment.

LS: To contrast to what you just said, moving forward a couple of years. When did the electronics develop into a more independent voice? When that did happen, what sort of role did it play in the music ensemble?

MRK: It was the second year, 2010, when Bluecoats did it. I think that the Bluecoats have always been a very forward thinking group as soon as electronics became available. We tried to use it as much as we could in 2009, with it being run really by one member and a bunch of people who did not know a lot about it.

Then in 2010 it was a huge year of change for the Bluecoats, and the use of electronics with the *Metropolis* show. Mike Jackson brought in Kevin Shah that year. We did a lot of new things with electronic design and equipment that year. As opposed to in 2009 with one speaker, and the same setup we had always had since Bluecoats started mic'ing things. We had the same microphones, from the first time we had bought microphones. We had the same speakers from the first time we bought speakers. We had the same mixer, it was all...

LS: Same windscreens. I remember that.

MRK: Yes, same windscreens. It was all the first generation of electronic equipment the Bluecoats owned. I think Bluecoats started mic'ing in 2005 or 2006. Do you remember?

LS: It was 2005.

MRK: Right, 2005 was the first year of mic'ing because 2004 was the first year of amplification.

LS: Fun fact I learned from Lee, the vibraphones were not mic'd in 2008.

MRK: Yeah they were.

LS: They weren't.

MRK: They were not?

LS: Lee said that they were not, because the soundboard was beat up and there weren't enough channels to mic all of the marimbas and the drum set. So they just decided not to mic the vibes.

MRK: Yeah, I think I do remember that. I remember there were times where for some reason or another, where we would take all of the vibe channels and mute them. I think it was because we had bad channels either on the board or in the snake. So we just left it off. I'm not positive, but that sounds really familiar. I have defiantly been involved with something like that at Bluecoats, some year.

LS: When that happened did you have to ask the vibraphones to play louder?

MRK: Probably, yes. There was probably a conscious choice. Like Brad was listening from the box and being like: "yeah, we can still hear the vibes. We don't need to deal with fixing all that stuff because it's going to cost money."

The whole electronics thing and the money thing is a whole other story we can get into. Just the process of talking, Dave Glasgow in this case, but talking all of the directors into buying the equipment. I'm sure most of them were like: "we have to buy all of this new stuff now?" It started with the microphones and the mixers as huge expense, because that stuff is really expensive.

LS: Speakers, and carts, and cases, and...

MRK: Ugh, yes. We do a full equipment budget on a spreadsheet now that's updated on the cloud at the beginning and end of each season. Our section leader last year put it together and gave it to us at the end of the season. He was like: "here is document one, which is the beginning of the season. And here is document two at the end of the season. These are the things that we lost and/or broke." The spreadsheets are awesome. That dude works for BMW now. Sorry, we went on a tangent.

So 2010, Kevin Shah came in. Kevin is from California. He was into it. He innovated the electronics thing. He already knew, or already figured out how to cut audio, and splice it together trigger by trigger. We used a human voice vocal.

LS: Can you talk about that? I remember the "Ah-ha" moment at the beginning of that tune in 2010. DCI has the rule that is something like "one motion and one sound," I don't remember exactly how they worded it.

MRK: Yes, I think it's one strike per sound.

LS: So how he was able to chop up the vocals at the beginning of *Ah-ha*, to make that vocal line happen.

MRK: Right. It was a woman's voice singing a melodic line. He cut that basically into one and two note groupings. I think it was eleven or twelve triggers. No, it was defiantly more than twelve triggers because I remember halfway through it Chris Mead had to change scenes as he kept playing. Sometimes he would hit a pad and it would make a sound that would start to do a glissando. The moment it reached the next note Chris could hit the next pad and the sound would fold over into the next note. He basically had to trigger each vocal syllable.

LS: So he had chopped up a pre-recorded track of a woman singing?

MRK: Yeah. I think he had done some kind of CD recording and editing, where you pan in and out over a super small period of time then overlap between the two. I think each track, or sample, had a little bit of overlap. Chris would have to practice this daily. We had to have the full sound system set up, and he would just play his part in time. Sometimes the pads would be single note, sometimes it would be double notes. We would have to go out front and be like: "Chris, between the seventh and the eighth note, you were a little late."

LS: Because what he was playing wasn't metrically in time? It wasn't simple rhythms. Like, this eighth note has to be a weird amount ahead or behind?

MRK: Yes, like "rush that eighth note syncopation, but it is not a whole metric click over."

LS: Rule number nine?

MRK: Yes, rule number nine: figure it out. Do it over and over again, get feedback and make adjustments.

The whole soundscape at that point had changed. Somewhere around 2001 to 2004, the front ensemble became very prominent in the design process at Bluecoats. I think 2010 was the beginning of the Bluecoats deciding that the electronics are really going to be a dominate force in the soundscape and the design process of drum corps.

LS: Let's talk about that.

MRK: The only other corps that I think may have attacked electronics as hard as we did in 2010 was the Blue Devils. I would have to check that and listen to it.

LS: And the Cavaliers. The Cavaliers did "Mad World" in 2010.

MRK: 2010 was “Mad World?”

LS: Yes.

MRK: Wow. That feels like it was such a recent show.

LS: That show was edgy.

MRK: Yeah. That show was definitely very modern.

LS: How did the incorporation of electronic instruments, you spoke about this a little bit specifically with the tuba and marimba doubling, but how did the incorporation of electronics effect the role that the front ensemble played? What was their role in the music ensemble?

MRK: I think that the front ensemble got a lot more responsibility. They got a lot more virtuosic exposure.

I think because there is consistently a minimum volume of a sound required to create a quality tone. That’s been applied to battery, that’s been applied to brass, that’s been applied to front ensemble. I think with the electronic element, it allowed the floor volume to be lower. Or bridge the gap of the floor volume of what a snare drum should sound like, or what a horn should sound like, or of what front ensemble instruments should sound like. It allowed us to fill the volume in between those floor volumes of each instrument family, to the balance and blend between those, to fill the gaps.

I think that electronic instruments may have allowed the front ensemble to get louder with more amplification; but it didn't feel synthetically loud, over gained, and over pushed. Because there was something that the front ensemble could do that would provide the role of a tuba, that was the electronics. Timpani has been the percussion ensemble’s tuba. That is our lowest instrument. It’s our biggest instrument other than bass drum. But bass drum is not tonal. Timpani is the lowest pitched sound in the percussion ensemble, and that’s what made pits sound big.

LS: It was the timpani?

MRK: It was the timpani.

LS: It sounds like what you’re getting at is, with the incorporation of electronics...

MRK: Yes, and maybe it got to the point where... well, micing timpani is really difficult. I mean getting a set of timpani outdoors to be micd and sound good is really hard. I would be surprised if anybody figured out how to do that really well.

LS: Is that why Bluecoats stopped using timpani?

MRK: That was a lot of the reason that we stopped doing it. Also, it is very difficult for the timpanist in drum corps to have amazing technique, to always be in tune, to be able to pedal and to be a virtuoso performer. I think that's why we stopped. Or, one of the main reasons why we stopped was because we no longer had a virtuoso timpanist.

LS: So your making a statement that the performers in the front ensemble by the time we got to 2010, they were all expected to be virtuoso performers?

MRK: Yes. And especially with the role of timpanists, the virtuoso timpanist who is under the age of 21, you can count them on one hand in the nation. Especially if they want to go march drum corps.

I wasn't there for the entire time of timpanists at Bluecoats. But two of those names Greg Tsalikis and Erik Kosman, they were there for ten years; two performers in ten years. Erik had gotten to the point where he was awesome at the job, but he didn't really get there until his third or fourth year. His first two years were rough, and I think I remember hearing some of the same things about Greg during his first two years. I know the timpanist that I was marching with in '99 at the Bluecoats got the business all the time. I think it is because there is a high standard for performance on timpani that's more of a historical tradition.

LS: I'm curious, do you have any opinions on how timpani are different in drum corps than timpani in a concert setting?

MRK: I think the biggest difference is pedal technique. In drum corps there is this certain level of always wanting to show off, whatever your doing. That is what's effective. That works for shows. It is when people are musically achieving things at a really high level, and it has really difficult content. That is a good way to have a good vertical moment that works with the audience.

With timpani the only way that happens is not through playing great rhythms, because that is expected. Or to play in tune, because that is expected. It must be in time and in tone. But really the thing that is coolest about timpani is the fact that you can tune really low pitched heads, and you can tune them quickly.

LS: Yeah.

MRK: That's what's cool about timpani, and why timpani have been great. Do you want a saxophone or baritone to play long tones all of the time? No, you want them to change notes. If you have an instrument that can change notes, you should be able to change notes.

So drum corps timpani were much more of a melodic instrument, and foot technique based. Much like twentieth century timpani repertoire. Bartók *Concerto for Orchestra*, that has your feet working a lot. You play the Martin, your feet are working

their butts off. They are just going nuts. But if your playing Beethoven you're not changing notes at all.

LS: Right.

MRK: Beethoven, you should be able to play Beethoven and show that you know how to play rhythms and make good sounds. In drum corps that is expected, that is the standard.

LS: I could make a correlation to what you said earlier, about drum corps being on the front end of percussion trends in general.

MRK: Yes.

LS: So you know as Mackey is writing harder and more complex timpani parts in band music, as things like that are happening, as solo timpani repertoire is developing and you have Carter being a heavier influence and Bartók being influential. You could make a direct correlation between these events and timpani in drum corps. Just being that drum corps is more flashy and "show off-y," they are going to take the more virtuosic techniques for any instrument and try to apply it.

MRK: Yes, and I think that the rep that was being played for solo marimba stuff. Like in 1998 how many people were playing *Rhythmic Caprice* other than Leigh Stevens? Or playing *Merlin*? Obviously *Merlin* and all of those other pieces, *Velocities*, *Reflections on the Nature of Water*, that stuff was literally just being written.

Nobody could know that this is where the marimba was going as a musical instrument. Great composers wrote awesome literature at that time, but it took a while for it to get into colleges. After colleges were getting hip to that stuff in the early '90s and then the late '90s, it sort of coincided with the percussion scene getting more educated people or a more educated philosophy behind what they were doing. And that was then getting into drum corps. Then that developed better techniques and better teaching methods. I think its just that drum corps has seemed to be one of the later recipients of trends in percussion.

It wasn't like all of the dudes teaching drum corps in '85 were reading Percussion Arts Society's letters to the editor. Things like that. And if they were, I think that the community was smaller and less connected. So it took a lot longer. But today if something happens you get on Youtube and you watch it, or you can go to the PAS website and check things out. You can see correlations and make connections a lot faster. So if somebody has an idea, or starts doing something new and fresh, you see it right away. Before the interconnectivity of the World Wide Web you didn't see what the other people across the country were thinking about or working on and doing until the world finals. Or you didn't see it until the season was well into its progression. So your ideas came in a bubble, as opposed to a part of a hive.

LS: That makes a lot of sense.

MRK: I think that has a lot to do with the more intelligent, technical, and musical approach. I think that's why its development has gotten faster.

LS: You made a really interesting connection to the way that drum corps has grown and the way it has matured compared to percussion in general. It has gone hand in hand, and some things have gone back and fourth. There are certain styles of playing that may have gotten popular first in drum corps. Where four mallet vocabulary and musicality on keyboard instruments are something that happened first in schools.

MRK: I think almost all of those trends that you see in the front ensemble, get popular first in the university. That's really interesting, I like that.

LS: I have a few more questions.

Did the use of electronics affect the instrumentation of the front ensemble in other ways? Maybe in decisions like whether or not to use chimes, or concert bass drums?

MRK: Oh my gosh, chimes. That was for me personally as a member, I remember how much I hated dealing with chimes. I also remember as a staff member in 2008 hating dealing with the chimes. I'm pretty sure we cut the chimes during move-ins or really early.

LS: Why did you hate them?

MRK: Because they are way too delicate of any instrument to deal with in drum corps and the rigors of being packed, and loaded, and dragged every day. And they don't sound good enough, or they don't have that quality of sound capability that we were searching for on all of the instruments. I didn't know anybody that was mic'ing chimes at the time. But as soon as 2008 was done and electronics were available, we immediately put all chime notes on the synthesizer.

LS: Not worth it?

MRK: Right. They are not worth it. The logistics, and weight, and management of that instrument specifically, was not worth it to me personally. And it wasn't worth it to the members to move them around. It was bad for the instruments.

That is something that could be a whole other tangent, the development of the equipment to make all of this possible. The frames, and sturdiness of the manufacturing of all of our gear. That's gone the other way, where it has gone to drum corps first most of the time, and transferred into much better designs even on concert instruments.

LS: Like the four octave vibraphone?

MRK: Yes, the four octave vibraphone. I'm thinking about the flimsy x-frame versus the box-frame that Adams makes.

LS: The Yamaha concert bass drum stand.

MRK: Yeah.

LS: Even the Pearl concert bass drum stands. Well, concert bass drum in general.

MRK: Yeah, the concert bass drum hardware development. You know, the thing that I don't think has been maximized enough is a single stand that does bass drum and gong. That rolls easily and transports well.

LS: One that you can use for both?

MRK: Yeah. Or, its one unit, one set of wheels that moves both bass drum and gong. Also, gong roll into bass drum hit, totally under utilized sound.

LS: That's hard to do.

MRK: Yeah. And you don't really want to devote two people to it. This could really lead into a discussion about the underdevelopment of the percussionist, in the drum corps front ensemble.

LS: Ok.

MRK: Wow, yeah. I can only speak from personal experience but in '99 I was the glock player and one of three dudes... our nickname was the "cold cut trio." We were the rack players. But the rack section at Bluecoats was the "Latin section." I was the timbale player, and Clay was the hand drummer, I also ran over to play glock, and John was like the drum set player. He was playing cymbals, and toms, and impact stuff. All three of us would go cover bass drum and gong. But yeah, so I was apart of a Latin trio. You know, auxiliary percussion in a latin band. I learned cascara, all of my claves, and learning about the African bell, and tumbaó, all of that stuff.

LS: So you did that, and you played glockenspiel?

MRK: Yeah.

LS: Did the other guys also play keyboard instruments?

MRK: No. They only played auxiliary stuff. They only played auxiliary instruments, even during warm ups. I would do the majority of the warm ups on keyboard, and play the percussion instruments during the show music.

So I was fifteen at the time, and I didn't really didn't understand the difference between sixteenth notes and triplets. I was a piano player. I could play things when I heard what they sounded like. But the quantization of music and subdivision was something that never really locked in until the end of my year at Bluecoats.

That was the level of the front ensemble person. The rack player was either somebody who was a drummer that would move over. Or more than likely the auxiliary percussionist was the last keyboard cut, as opposed to the last battery cut. Now it's pretty consistent that the person who earns the spot at a drum corps as the percussionist, is a specialist who was trying out to be the percussionist. Whether that's the drum set spot, or the auxiliary concert percussion spot. Or to be the timpanist. Whatever it is, they are auditioning for that spot specifically. Instead of being somebody who was not good enough for another spot. The same goes for keyboard players.

LS: It seemed like there was a trend for a while where people would switch instruments.

MRK: Yeah.

LS: You eluded to that a little bit earlier. Can you talk about that concept in general? Why are people switching instruments? What was going on there? Why did that end?

MRK: I think that the switching instruments concept in the front ensemble, which used to be called the "pit," comes from the pit orchestra. That was the mentality, where the percussionist in the pit orchestra is the dude that has the glockenspiel, the xylophone, the vibraphone, seven thousand toys, a drum set, a suspended cymbal, and three timpani. And they play all of that during the show. So they are playing everything. Usually the pit orchestra books that I play are with two people. One person plays drum set, plus toys. The other person plays all of the keyboard instruments and timpani, plus toys.

But it was expected that you play more than just one instrument. When I was at Kiwanis Cavaliers I played vibraphone on one tune, xylophone on one tune, and marimba on one tune. I also went out onto the field. They sent three or four of us out on the field and we marched cymbals for one song. We did whatever they needed us to do. They wanted cymbals for the ballad so we went out onto the field and we marched cymbals in the ballad. Just the vibraphones and the marimbas played, they got ride of the xylophone for the ballad.

LS: That makes sense, you don't want that texture.

MRK: Yeah, you wouldn't want a xylophone in the ballad. But, switching was the standard back then.

LS: For everyone, or just your groups?

MRK: Not in '99. In '99 at Bluecoats you had your keyboard spot. You were the marimba player, and you kept playing marimba the whole show. That's what the Bluecoats were doing.

LS: Do you remember what other drum corps were doing at the time? It seems like from what I observed on the videos a lot of drum corps had front ensemble members switching instruments. It seems like that was the trend, do you remember anything about that?

MRK: That was the standard at the time. It didn't seem weird, it was actually the hype. One of the coolest things about being in the front ensemble was the tech saying "hey can you go hit that thing in three counts?" And you would be like "yeah! I can do that! Give me more notes, add more things in. Let me move from this instrument to this instrument; and if you think you need it then the answer is yes, we will find a way to do it." That turned into a whole, well, that is why playing in a pit orchestra is fun. Can you play all of these things? Can you move around all of these instruments? I think that was the thing that made front ensembles cool before the "technique revolution."

LS: That was the thing that made "pits" cool before the "front ensemble" revolution?

MRK: Yeah. When I came back in 2008 everybody had their keyboard and they stayed on it the entire time and never moved. I think that started with the Cavaliers, and some of the innovations that Erik Johnson was bringing. Especially in terms of the setup, and keeping people in one place.

It was also kinda this whole vibe of: let's be more professional, and let's stop being the pit and let's be the front ensemble. That was a regular thing for us to talk about in '99 at the Bluecoats, not being called "the pit." We felt like we were smarter than that. There was a negative connotation to it being the pit.

LS: Like the pit might just be accompaniment to the show, you felt like you needed to have a voice or a role in the show?

MRK: Yeah but even less artistically than that. It felt like it had the connotation of being a dumping ground. But the people that were in it were like: "no, this stuff is cool. And what we are doing is supplementing the show." We had a lot of pride. But the word "pit" coming from other people, had a lot of historical context. That verbiage transitioned over to "front ensemble" as it was becoming more educated.

LS: Ok.

MRK: Yeah that was just a weird thing that I felt. So that whole idea of being more professional and more of a "front ensemble" and less of a "pit." Less of a pit orchestra running around. It was an ensemble, everybody has their instrument that they focus on.

And the keyboards, there have been all kinds of variations of how much gear you put on top of that keyboard. I don't think that anybody has ever really used the accessory

bar really well. Not in the way that I have seen contemporary classical modern percussion ensembles, chamber groups, and duets use them.

LS: It's funny, because the reason I don't want to put a bunch of instruments or gear there is because it makes it really uncomfortable to pull.

MRK: Yes. It's a logistical issue.

LS: I feel like the logistics of drum corps hinder...

MRK: Some of the artistic possibilities?

LS: Yes.

MRK: I wonder if it's worth it to just put all of that stuff there, and make it succinct enough in your setup process, that you could take the stuff that is terrible to pull and put it on in the course of the two minutes you have to set it all up.

Like you run cables, you drop off your keyboard. You're coming out and you have three toms for each keyboard. And you pull it off the cart and bam, cable, plug plug plug. You know? With the amount of time it takes to set up the full electronic system, the last thing to set up at this point is all of the computers turning on and all of the cables being run, and sound checking all of that stuff, making sure all of that stuff is live. There is enough time in the programming, and the logistics of getting on and off the field, that we could add all of that equipment there without having the troubling of pushing and pulling the instrument being the issue.

But, that is a very good point. Nobody wants to move that stuff. Have you moved a keyboard with a crotale bar on it?

LS: Yeah.

MRK: That is terrible. That is horrible.

LS: This sounds silly, but that kid can't wear his backpack transitioning between rehearsals. With the crotale bar you have made that kid's summer a little worse.

MRK: Yeah. Just because they have that crotale rack on their keyboard.

LS: I still do it, it's worth that color. I just let that kid put his back back on the cart, or we will take the crotales off and put them on the cart.

MRK: Right, just like that. Why can't we use more accessory instruments on the keyboards?

LS: The Rennicks do it all of the time.

MRK: Yes they do. They do a really good job of maximizing that front bar.

LS: Casella also did a good amount of that.

MRK: Casella, yeah.

LS: The Casella Vanguard years. Even his years at the Cavaliers, he had a lot of front ensemble sounds.

MRK: Yeah. I think that was the original intent of those bars, and that equipment revolution, was to make all of all of these sounds readily available in the front ensemble. I bet there is a direct correlation between the use of their setup beyond the keyboard, but with the accessory bars and what accessories go on the equipment. I bet there is a direct correlation between the amount of instruments and variety of instruments, more than amount and the quality of orchestration. It's like people think of the easy answer versus the difficult answer.

Lane, I am afraid we are close to being out of time. Do you have anymore questions?

LS: No, no burning questions. I will get back to you if I think of something else. Thank you for you time.

Appendix E

Email Correspondence from Michael Boo

Michael Boo is a longtime staff writer for Drum Corps International. He marched as a member of the Cavaliers Drum and Bugle Corps in the 1970s.

The following is an email correspondence from Michael Boo. This correspondence took place on February 24, 2016.

Lane:

I can tell you that chimes were not considered a legal instrument yet. From 1974 through 1976, only marching bells and xylophones were legal. (SCV's Fred Sanford was the first to use softer mallets on the lower range of a xylophone to get a marimba effect. Also, SCV's founder and director Gail Royer found an old set of Deagan alto bells in his junior high band room. Because they were bells and not vibes, he was able to put them on the field in 1975, the year SCV used two metallics. The alto bells sounded very much like vibes because they were an octave lower than regular bells, which sound two octaves higher than written.

When I played mallets for Cavaliers, I marched xylophone in 1976 and marimba in 1977, the year vibes and marimba were legalized. You should find a photo of Spirit of Atlanta's marimba/vibes, which they used in 1977 and 1978, They were vibes on one side and marimba on the flip side, meaning the instrument was quite heavy and had no resonators. I've seen the photo on the Internet many times. Dan Spaulding, who taught me in Cavaliers, went to the new Spirit corps in 1977 and created that hybrid instrument. His reason was there were still only two mallet players allowed. DCI allowed four mallet players in 1978,

So, how did 27th Lancers pull off the chimes? The instrument was technically considered a set of marching bongos. 'Legally,' the chimes were attached to the bongos and not the other way around. Cavaliers also marched four individual chimes, which were brought on the field attached to the backs of a couple cymbal players and attached to the bottom of the bells and xylophone. Equipment wasn't allowed to be picked up from the field, which is why we never saw a change of flags until 27th Lancers invented the double flags effect that were stored inside the flag poles. However, once the chimes were used, they were allowed to be set on the field in front of the front line. Those who set them on the ground had to be very careful their feet didn't touch the front line, which would have resulted in a penalty