A Survey of Performance Practice of Electroacoustic Music for Wind Band Grades 2-3

2018 Kansas Music Educators In-Service Workshop
February 24, 2018

PRESENTED BY

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MUSIC & THEATRE
at Baker University

NOTES:

Please feel free to contact me if you have any questions or would like help setting up your tech.

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DEMONSTRATION ENSEMBLE

Wichita High School East, the oldest and largest high school in Wichita, is the direct descendent of the original Wichita High School. It was renamed Wichita High School East in 1929 when Wichita High School North opened. The band program at East under the direction of Maranda Wilson and Carla Chapman has two concert bands and a jazz band. The program has a long history of excellence and has performed at least twice at KMEA. The Symphonic Band is made up of auditioned players in grades 9-12. The band has received recognition in performances in several states, and consistently receives one ratings at festivals. To prepare for today's session the band spent only six fifty-minute rehearsals (three with Dr. Perez) working on the three pieces performed today. – Maranda Wilson

** Special **thank you** to all of the students and their directors. – Dr. Perez*

INTRODUCTION

Electro-acoustic music for wind band is an emerging genre among contemporary composers that incorporates and blends an electronic soundtrack and cues with traditional wind instruments (Perez, 2015; p.iii). Composers are exploring new sonic colors through electronics that expand the traditional palette beyond that offered by acoustic instrument. As technology improves, composers are increasingly able to incorporate electronic sounds into their compositions in an easier, more organic, and seamless manner, thus reducing the challenges in rehearsing and performing this new repertoire (Perez, 2015, p.35). Conductors may be required to understand and to acquire new skills when preparing this literature including becoming comfortable using headphones to follow a "click track" metronome and an audio track with the electronic sounds while conducting in performance. To integrate electronic sounds with live musicians, the conductor must have a comprehensive understanding of the technologies involved. These challenges and considerations may discourage conductors from programming electro-acoustic repertoire. Yet there is a wealth of excellent new music in this genre that would be beneficial for students and enjoyable for audiences. There is a need to have appropriate models illustrating how these various elements work independently and how they are brought together and used to build a sequential rehearsal progression. As technology continues to make it easier to integrate electronic sounds into electro-acoustic music, the process will become more seamless. Composer Steven Bryant states, "we will no longer talk about 'electro-acoustic' music" but simply accept it as a "standard possibility" (Perez, 2015, p.iii). This presentation will survey some of the technology and performance considerations as they relate to rehearsal preparation and performance of three grade 2 to 3 wind band works: *Paper Cut* (2010) by Alex Shapiro and *Coil* (2014) and *The Machine Awakes* (2012) by Steven Bryant.

** Material for this handout is excerpted from my doctoral dissertation (Perez, 2015).*

List of Composers and Their Websites (Perez, 2015, p.40)

* Links are clickable in PDF Version

Larry Austin	http://cemi.music.unt.edu/larry_austin/LAWorks.htm
Mason Bates	http://www.masonbates.com
Thomas Rex Beverly	http://www.thomasrexbeverly.com
Steven Bryant	http://www.stevenbryant.com
Jay Chattaway	http://www.barnhouse.com/composers.php?id=-201
James M. David	http://www.jamesmdavid.com
Donald Erb	https://www.presser.com/composer/erb-donald/
Jeffrey Hass	http://www.music.indiana.edu/departments/academic/composition/recordings/hass/index.shtml
Jerker Johansson	https://www.prestoclassical.co.uk/sheet-music/composers/48548--johansson-jerker
Daniel Montoya	http://danielmontoyajr.com
Martha Mooke	http://www.marthamooke.com
Craig Thomas Naylor	http://www.swanriverpress.com/biography.php?page_title=Craig%20Thomas%20Naylor
Alex Shapiro	http://www.alexshapiro.org
Christopher Stark	http://www.christopher-stark.com

LIST OF ELECTRO-ACOUSTIC WORKS FOR WIND BAND BY GRADE (Perez, 2015, p. 41)

*non-exhaustive

Title	Date	Composer	Gr	Publisher
Déserts (25:35)	1949/54	Varése, Edgard	N/A	Boosey & Hawkes ***(Rental)***
Quadrants: Event/Complex No. 1 w/tape (9:00)	1972 /94	Austin, Larry	4	Peermusic Classical
Catharsis: Open Style for One Large and One Small Improvisation Ensemble, Tape, and Conductor (9:00)	1965	Austin, Larry	N/A	N/A
Stargazing (3:00)	1966	Erb, Donald	4	Theodore Presser Company
Purple Roofed Ethical Suicide Parlor, The (10:00)	1972	Erb, Donald	5	Theodore Presser Company
Captain Video w/CD *optional* (3:45)	1982	Chattaway, Jay	1.5	William Allen Music Co.
Lost In The Funhouse (13:39)	1994	Hass, Jeffrey	5	Ludwig Masters Publications
All The Bells and Whistles	1997	Hass, Jeffrey	N/A	Manhattan Beach Music
Voices of Water and Spirit (8:20)	2000	Naylor, Craig Thomas	3	Swan River Press, Inc.
Missing Man w/CD sound effects (3:00)	2005	Johansson, Jerker	3.5	Arrangers Publishing Company
Rusty Air in Carolina (13:00)	2006	Bates, Mason	N/A	APHRA Music ***(Rental)***
Ecstatic Waters (22:00)	2008	Bryant, Steven	5	Gorilla Salad Productions
Augenblick (13:30)	2008	Stark, Christopher	N/A	Sommerso Publishing
Sea–Blue Circuitry (13:00)	2010	Bates, Mason	N/A	APHRA Music ***(Rental)***
Paper Cut (5:00)	2010	Shapiro, Alex	3	American Composers Forum
Mothership (9:00)	2011	Bates, Mason	N/A	APHRA Music ***(Rental)***
Ringing Rocks (6:00)	2011	Beverly, Thomas Rex	3.5	Thomas Rex Beverly
Immersion 3 mvmts. Depth, Beneath, Surface. (23:00)	2011	Shapiro, Alex	4/5	Activist Music
Machine Awakes, The (5:00)	2012	Bryant, Steven	2/3	Gorilla Salad Productions
Solace (14:00)	2012	Bryant, Steven	5	Gorilla Salad Productions
X-ing (14:00) Solo electric viola & concert band	2012	Mooke, Martha	N/A	Vener Music Publishing
Tight Squeeze (3:00)	2012	Shapiro, Alex	4	Activist Music
Chicago 2012 for Band	2012	Bates, Mason	N/A	APHRA Music ***(Rental)***
Thumpin' With the Good King	2013	Keifer, Ed	1	C. Alan Publications
Coil (5:00)	2014	Bryant, Steven	3/4	Gorilla Salad Productions
Liquid Compass (9:00)	2014	Shapiro, Alex	5	Activist Music
God Rest Ye Merry, Peeps	2014	Keifer, Ed	1	C. Alan Publications
Five-Note Jive	2014	Kiefer, Ed	1	C. Alan Publications
Even Deeper	2014	Shapiro, Alex	N/A	Activist Music
Garage Band of iOS Grage Band & iPad (4:45)	2015	Montoya, Daniel	3	Underwater Theme Productions
Lights Out (5:00)	2015	Shapiro, Alex	4	Activist Music
Velocity Meadows (11:30) Solo oboe, chamber winds, electronics & video.	2015	Stark, Christopher	N/A	Sommerso Publishing
14,409' for Wind Ensemble & Seasonal Electronics (6:00)	2015	Beverly, Thomas Rex	NA	Thomas Rex Beverly
Rock Music	2016	Shapiro, Alex	2.5	Activist Music
Moment	2016	Shapiro, Alex	4	Activist Music
Trains of Thought	2016	Shapiro, Alex	4	Activist Music

OVERVIEW OF TECHNOLOGY REQUIREMENTS (Perez, 2015, pp.10-15)

Performing electro-acoustic music for wind band requires equipment ranging from a simple stereo speaker setup to large arrays involving computer audio software, digital audio interfaces, microphones, floor monitors, hot-spot speakers, and personal monitor systems for the conductor. Although composers strive to offer an accessible, non-threatening setup, having a comprehensive understanding of the equipment needed can help the conductor gain insight into funding requirements, rehearsal and performance practice, logistics, and how to train the musician coordinating the electronics. Additionally, the conductor will learn terminology necessary to better communicate with the audio engineer should there be one available to assist with the technology component. To ensure successful rehearsals and performances, it is highly recommended that the conductor/sound engineer purchase the appropriate equipment and have ample lead-time to test it with the electronic track. Otherwise, it is conceivable to waste an entire rehearsal trouble shooting the technology (Perez, 2015, p.17).

There are three general approaches to integrating a pre–recorded track or collection of electronic sounds:

The simplest level of integrating electronics with acoustic instruments corresponds with the first of three methods composer Alex Shapiro writes about in her article (Shapiro, 2014, p. 10). The electronic sounds are pre-recorded onto a single, long running track that is the same length as the entire piece. They are predetermined, designed, and recorded by the composer so that they playback exactly the same each time the piece is rehearsed and performed. This is the approach that most composers are gravitating towards as it makes their work accessible to a wide variety of band programs with limited knowledge of electronics or availability of equipment (Perez, 2015, p.10).

Steven Bryant's piece, *The Machine Awakes*, is a perfect illustration of the most basic setup: two powered speakers, a small mixing console and a playback device. The audio signal path would start with the playback device sending the signal to a mixer with two speakers connected to it that are placed on stage either in front or behind the ensemble (Perez, 2015, p.10).

The next level of complexity introduces a click-track (i.e. a metronome for the conductor) as in Alex Shapiro's *Paper Cut* and Steven Bryant's *Coil (Track version).* This method is becoming more common as more composers are choosing to use this method. It involves playback of two tracks simultaneously. One track has both the click and the electronic track for the conductor and the other consists of the electronic track alone, which is routed to the audience and the ensemble. This necessitates a computer and a digital audio interface capable of sending out two stereo signals (four output jacks) that can be routed to two different locations (conductor headphones and stage speakers). Most playback devices, including computers, have only a single stereo output jack and are not capable of sending out two different stereo signals. The digital audio interface makes it possible for the click track to be sent to the conductor's headphones independent from the electronic track being sent to the ensemble and the audience. Usually the main electronic track is in stereo and the click track may be mono or stereo. Therefore, the digital interface needs to be capable of sending out four output signals (Perez, 2015, p.12).

The digital audio software installed on the computer must also be capable of playing multi-channel audio through a digital interface. Digital recording applications such as *Cubase, Logic, Pro Tools*, etc. have this capability and can be configured to use most digital audio interfaces on the market. Once the audio software is chosen, both the track with click and the track without the click are imported into the program and aligned so that they are synchronized during playback (Perez, 2015, p.13).

Composers Steven Bryant and Thomas Rex Beverly use computer programs such as *Ableton Live* or *MaxMSP* to program their sounds and do not give the conductor a choice of which software program to use. These two programs make use of the multi-channel output capabilities and also incorporate a click track (Perez, 2015). This third approach to integrating electronic sounds with acoustic instruments is the most sophisticated from a programming standpoint, it offers the most flexibility and fluidity with regards to time and integration. For his piece, *Coil,* composer Steven Bryant has programmed all of his sounds into MaxMSP and has made the file available to download from his website. First, an 88-key MIDI keyboard is connected to the computer running the sound patch file for *Coil.* Bryant has written out the keyboard part in standard notation and has assigned certain notes/pitches trigger sound patch changes within the software. No extra effort needed aside from the initial setup. Since this set up does not require a click track it offers the most flexibility tempo–wise. The only hardware needed is a computer, 88-key MIDI controller, a DI (Direct input box) and a pair of powered speakers.

RECOMMENDED EQUIPMENT (Perez, 2015, pp.37-38)

* Please note that you do not need to purchase all of these. What you purchase will depend on what you need for each individual piece.

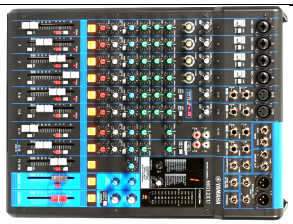
 https://www.sweetwater.com/store/detail/AudioExpress	**MOTU Audio Express USB/Firewire–Audio Interface** *Used for *Paper Cut* & *Coil* (click track version). ** Any audio interface with 4 output jacks (1/4") will work with most electroacoustic repertoire.
http://www.sweetwater.com/store/detail/CubaseA8Edu	**CUBASE–Multi-channel Audio Software** *Used for *Paper Cut.*
 http://www.sweetwater.com/store/detail/MG06	**Yamaha MG06 – Six Channel Mixer** *For the conductor to use beside the podium for volume adjustment of click track in headphones or hot spot monitor.
 http://www.sweetwater.com/store/detail/PowerPlay1	**Behringer Power Play P1** **In-ear Monitor Amplifier with Dual Inputs** *For the drum set player to hear click-track. This makes a huge difference when working with a click track.
 http://www.sweetwater.com/store/detail/CleanBoxPro	**ART Clean Box Pro** **Direct Box** *Used to convert (amplify) and route the sound from the computer to the mixer or directly to the powered speakers – Used to amplify the sound from the computer in *Coil.*
http://www.sweetwater.com/store/detail/MDR7506/	**Sony MDR-7506 – Closed Back Headphones** *For the conductor listening to the click track. Great quality headset!
 http://www.sweetwater.com/store/detail/K12	**QSC K12 Powered Speaker** *Self-powered speakers can be used as both speakers and floor monitors.
 http://www.sweetwater.com/store/detail/MG16	**Yamaha MG16–Sixteen Channel Mixer** *Used to mix full band with the electronic track.
 http://www.sweetwater.com/store/detail/NU4-6000	**Behringer iNuke NU4-6000–Power Amplifier** *Powers one stereo pair of passive speakers and one stereo pair of passive floor monitors. Use with mixer if you do not have powered speakers.
 http://www.sweetwater.com/store/detail/B205D	**Behringer Eurolive B205D–Hot Spot Monitor** *Hot Spot speaker for the conductor to monitor the electronic track.

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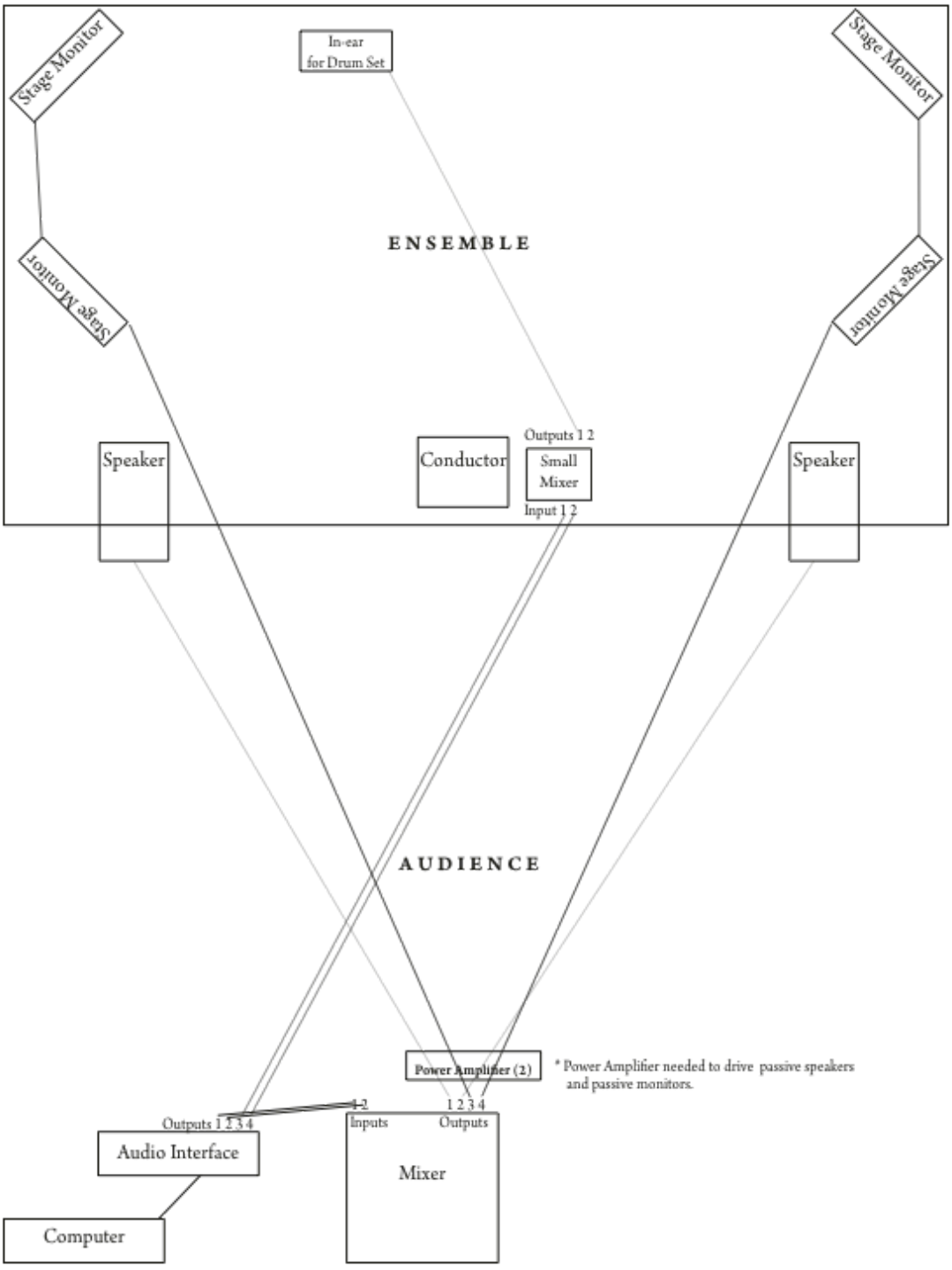
DIAGRAM OF RECOMMENDED SETUP (Perez, 2015, p.39)



RESOURCES

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