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Spring 2017

# From the signal

Christine Burke  
*University of Iowa*

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FROM THE SIGNAL

by

Christine Burke

A thesis submitted in partial fulfillment  
of the requirements for the Master of Arts  
degree in Music in the  
Graduate College of  
The University of Iowa

May 2017

Thesis Supervisor: Professor David K. Gompper

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Graduate College  
The University of Iowa  
Iowa City, Iowa

CERTIFICATE OF APPROVAL

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MASTER'S THESIS

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This is to certify that the Master's thesis of

Christine Burke

has been approved by the Examining Committee for  
the thesis requirement for the Master of Arts degree  
in Music at the May 2017 graduation.

Thesis Committee:

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David K. Gompper, Thesis Supervisor

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Jean-François Charles

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Jorge Moreno Montilla

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Josh Levine

## ABSTRACT

*from the signal* is a piece for two simultaneously existing trios, where Trio 1 is comprised of clarinet, trumpet and percussion, and Trio 2 of violin, viola and violoncello. I use open form, indeterminacy, and nonstandard methods of notation to neutralize narrative form, creating instead a static world where sounds interact without implying purpose or direction.

The ideas of identity and concealment are central to *from the signal*, as each trio embodies a set of timbral characteristics that are respectively unique but exposed in different ways. Trio 1's direct, strident material is an orchestrated amplification/extension of the slow progression of an EBow down the string of an acoustic guitar (played by the percussionist), while Trio 2's softer sounds explore notions of space and closeness as they relate to pitch. The title refers to the roles of the percussionist and violinist, as they are responsible for leading and pacing their respective trios throughout the piece.

This piece may raise questions about power dynamics, relationships and balance, but is in no way an attempt to make a conclusion about these things. My intent is rather to create a musical situation where listeners are invited to consider the ramifications of such juxtaposition for themselves (drawing their own conclusions, or not). *from the signal* was written for the Chicago Civic Orchestra Composers Project, and will be premiered on May 28<sup>th</sup>, 2017.

## PUBLIC ABSTRACT

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## **TRIO 1 - CLARINET, TRUMPET, PERCUSSION**

One blended composite sound from 3 different instruments that is direct and strident. Silence from **TRIO 1** will reveal the sound(s) from **TRIO 2**.

**PERCUSSION**: 1 small 5" diameter cymbal (for trumpet player), acoustic steel stringed guitar (placed on a level table), eBow.

**Guitar preparations**: Prior to rehearsal/performance, the percussionist should prepare the guitar with a large straightened-out paperclip approximately 1/3 of the way down from the first fret (towards the 2<sup>nd</sup> fret), threaded in between the strings so the D string is elevated above the A and G strings. The velvet pouch from the eBow should be folded in half once horizontally and placed 1 inch underneath the lower end of the guitar. The natural lay of the guitar causes the strings to not lay level to the table, but the folded eBow pouch will adjust the height of the guitar so that the strings are a slight degree closer to being level with the table. Guitar should be amplified (see notes on the next page)

**PERFORMANCE NOTES**: The percussionist has the important role of watching over the eBow as it moves along the strings of the guitar. Any tampering with the eBow (which might be necessary at times) should be done with the utmost care. The part contains dark boxes (with timings) that indicate periods of sound, and blank space that indicates periods of silence.

To begin the piece (0:00), one hand should mute the strings, while the other hand places the eBow so the front of it is just above the edge of the fingerboard, with the D string centered in the groove underneath the eBow. The eBow should be sitting comfortably on the strings, and turned on to the harmonic setting. Unmute the strings at the beginning of each sound period, and mute them again at the end, taking care to avoid extraneous noise. The percussionist must also signal to the clarinet and trumpet players to coordinate the end of each period of sound; all instruments should cut off together.

As the piece goes on, the eBow should gradually be sliding down the guitar towards the tuning pegs. Timbre and pitch content will change as the eBow progresses along the string, and the eBow should remain relatively uninterrupted throughout this process. There are two exceptions to this:

- 1) *if the eBow remains on one spot/one sound for longer than 1 min*, the performer may **a)** very slightly nudge the body of the guitar until the eBow moves on, or **b)** push the eBow forward very slightly with their finger.
- 2) *if the eBow reaches within three frets of the paperclip*, the percussionist may use the next period of silence to silently move the eBow back to another position on the string.

## **CLARINET (Bb) + TRUMPET (C)**

**PERFORMANCE NOTES**: The clarinet and trumpet parts consist of multiple sound events displayed in a random order on the page. The performer may read through these in any direction (forward, backward, up, down), spending approximately one breath's length on an event before moving onto the next. Performers may improvise the order of events in rehearsal/performance, or predetermine an order (perhaps by drawing a path on the part) **as long as the order is different for each performance**. Not all sound events on the page will be played over the course of the piece. Beginnings and ends of sounds should be tapered (to and from *riente*).

Clarinet and trumpet may play **only** when the guitar is sounding. Both performers should play nearly constantly. The percussionist will indicate to the clarinetist and trumpet when to cease playing. Dynamics (unless otherwise indicated) should generally be within the ***mf - f*** range, but should **always** be determined by listening for a balanced sound, with the clarinet and trumpet contributing an equal sonic imprint. Accidentals apply only to the notes they precede.



## CLARINET AND TRUMPET NOTATION KEY

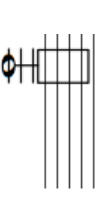
### Clarinet:



Slow pitch bend through lip vibrato. Range of pitch bend should never exceed a semitone above or below the indicated note.

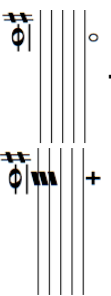


Change as smooth as possible between a straight tone and flutter tongue. May substitute growling instead.



A multiphonic produced by embouchure manipulation (less jaw pressure on the reed) while fingering the fundamental (F). Performer should attempt to maintain the sound as stably as possible while playing it.

### Trumpet:



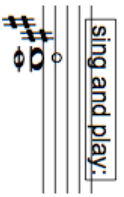
Open/muted. A bubble mute should be used for notes with a muted sign. If a bubble mute isn't available, a harmon mute may be used instead.



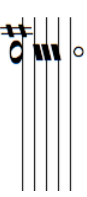
Use a 4" diameter cymbal as a mute, varying pressure on the bell of the trumpet to produce a continuous transition between a completely muted sound (the most pressure) or a rattling sound (least amount of pressure). **Notated pitch is sounding**- performer will have to make adjustment, as the cymbal mute will cause the pitch to go up by a half-step.



Play the pitch indicated with the larger notehead while singing the pitches of the smaller notehead.



A# may be taken up an octave depending on voicetype.



Flutter tongue. May be executed consistently throughout the duration of the note, or as a transition between a straight tone and flutter tongue.

## TRIO 2 - VIOLIN, VIOLA, VIOLONCELLO

**TRIO 2** involves a progression of sonorities that will be revealed in the absence of sound from **TRIO 1**.


**PERFORMANCE NOTES:** **TRIO 2** should begin a few seconds after **TRIO 1** has begun and continues until the piece is over (at 10:00). The violinist should use a stopwatch to keep track of time.

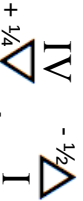
The dotted lines separate different sonorities (chords) from one another. The violinist cues the first chord and controls the rate of progression for the entire piece, choosing to spend between five and thirty (:05-:30) seconds on a sonority before moving on to the next. Performers should take a break/breath between notes (between :02-:05 seconds). After the violinist has changed notes, the violist changes next (within a few seconds of noticing that the violinist has changed), followed in a similar manner by the cellist. The violinist must wait to make sure all performers are on the same sonority before moving on.

Depending on the pacing that the violinist employs, it is possible that the score may not be realized completely. If performers get to the end of the score and time is still left, they should transition back to the beginning. At 10:00, the violinist should wait until all performers are on the same sonority, and then decrescendo to *niente*; the violist does so next, and then the cellist.

Dynamics should always be **ppp**. When playing specifically notated pitches, performers should use a slow circular bow (move the bow in a circular motion on the string so that it is at times sul pont, ord, sul tasto). All entrances and exits should be to/from **niente**.

### NOTATION

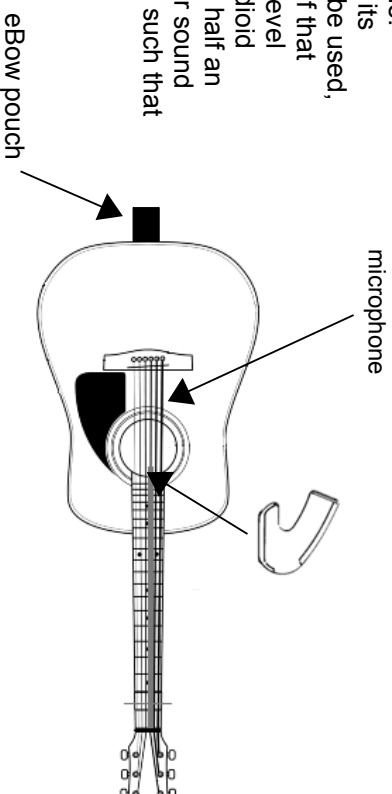

 A triangle pointing upward indicates to play the highest (off the fingerboard) note on the indicated string. A triangle pointing downward indicates to play the lowest possible fingered note on the indicated string (not the open string).


 Move the approximate intervallic distance from the previous position held.

### SETUP + AMPLIFICATION

**TRIO 1** and **TRIO 2** should be as far apart from each other as possible.

**Amplification specifics** can depend on the performance venue and its capabilities. At the very least, two full-range PA loudspeakers should be used, and placed sufficiently in front of **TRIO 1** as to avoid feedback (even if that means pushing **TRIO 1** back a little bit). Amplification should be at a level equivalent to a **forte** level sound from the clarinet and trumpet. A cardioid microphone on a stand should be placed as indicated, approximately half an inch above the strings. The microphone functions to amplify the guitar sound and will ideally also pick up residue of the clarinet and trumpet sound such that all 3 are present in the loudspeakers.



clarinet (Trio 1)

from the signal

Christine Burke  
(2017)

The musical score is presented in ten staves, each with a treble clef and a key signature of one sharp (F#). The notation includes various rhythmic values, rests, and dynamic markings such as 'ppp' and 'ppp'. The score is arranged in a grid-like format with ten staves and eight measures per staff.

trumpet in C (Trio 1)

from the signal

Christine Burke  
(2017)

The musical score is presented in a grid of 12 systems and 2 columns. Each system contains a vocal line (left) and a trumpet line (right). The vocal line is written in a soprano clef with a key signature of one sharp (F#). The trumpet line is written in a soprano clef with a key signature of one sharp (F#). The score includes various musical notations such as notes, rests, accidentals, and dynamic markings like 'ppp' and 'gliss'. Performance instructions are provided in boxes, including 'sing and play:', 'pedal tone:', and 'gliss:'. The score is arranged in a grid-like format with 12 systems and 2 columns of music.

percussion (Trio 1)

## from the signal

Christine Burke  
(2017)

1) 0:00 – 3:00    3:07 – 6:15    6:40 – 9:00

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2) 0:00 – 3:45    4:25 - 6:00    6:10 – 9:00

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3) 0:00 – 5:00    5:30-6:45    7:00 – 9:00

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4) 0:00 – 4:00    4:10 – 6:00    6:30 – 9:00

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5) 0:00 – 3:00    3:30 – 5:30    5:40 - 7:00    7:15 - 9:00

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6) 0:00 – 3:00    3:30 – 6:00    6:10 – 9:00

string trio (Trio 2)

from the signal

Christine Burke  
(2017)

(back to beginning)