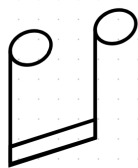


# Ethereal Presence

for Cyberinet

Matthew A. Bardin

2023



MaB Music



On the Cyberinet:

The Cyberinet is an electronic enhancement to the standard B-flat clarinet. By replacing the barrel with the Cyberinet, the performer and composer gain access to an integrated collection of sensors that collect various performance data. This data can be wirelessly transmitted to a computer for electronic processing and software control. An ever-growing list of optional expansions is also available to be connected to the Cyberinet to allow for the performer to customize the instrument to their performance needs.

The complete list of hardware needed for this composition is:

The Cyberinet

Microphone

Audio Interface

Computer running the Max patch available here: [matthewbardin.com/ethereal](http://matthewbardin.com/ethereal)

On Notation:

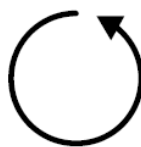
This score uses largely traditional notation. Fermatas and long rests can be held for any duration. Half rests and shorter should be played in tempo.

Double Bar lines indicate different sections of the work and do not imply a pause.

Dashed bar lines are provided to help with counting various sections, but may be ignored by the performer if desired.

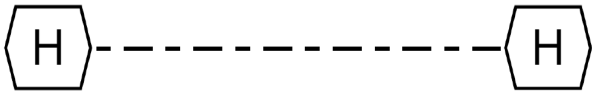
Specific performance gestures are used in order to control the software portion of this composition. These gestures are used to control and alternate between two different effects applied to the accompanying sound, and are represented with three different symbols.

This symbol circular indicates making a quick, counterclockwise rotation of the instrument with the wrist. The general position of the instrument should not change, as the rotation axis is Cyberinet itself. This gesture is used to swap between the active synthesizer.

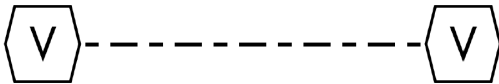


These lines indicate that the performer should perform exaggerated horizontal or vertical movements during the music underneath the lines. These movements should generally be slow, gradual movements in order to avoid confusion with the switching trigger. However, the performer should experiment in order to find the exact size and speed for the effect they desire. The symbols below indicate speeding up or slowing down the vertical gesture respectively.

Moving Horizontally to the left will increase the amount of background noise present, while moving right will decrease the amount. (See On Software for more effect information)



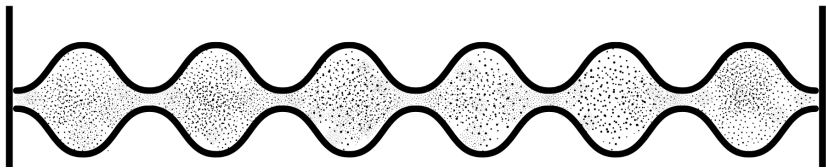
Moving the bell up will increase the pitch of the FM synthesizer, while moving down will decrease it. The upper frequencies are filtered off to avoid uncomfortably high frequencies. (See On Software for more effect information)



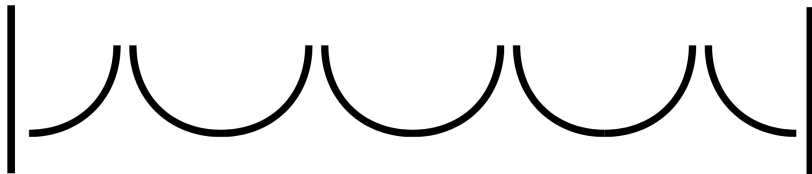
When the switches occur, data from the previous effect is stopped, and new data is fed into the new synthesizer. This results in the synthesizers holding their state until the next switch. The FM synthesizer will gradually fade out to avoid a constant drone.

In addition to notation the gestures, the approximate effect is notated on the second staff in the score.

This symbol represents the fluctuating range of the filtered noise.



This symbol represents the raising and lowering pitch of the FM Synthesizer.



#### On Software:

The Max patch for this composition can be downloaded at [matthewbaridn.com/ethereal](http://matthewbaridn.com/ethereal). The movement sensors are utilized for collecting data to control two synthesizers within the Max environment. The computer running this patch should be connected to an output speaker loud enough to match volume with the Soloist.

The first synthesizer generates backing through filtered noise. The range of frequencies allowed through the filter are determined by horizontal directional movement. These frequencies produce a textural background.

The second synthesizer produces A single through FM synthesis. The specific pitch is determined through a microphone placed in front of the performer to detect the pitch they are playing in real time. That value is then scaled based on the vertical position of the instrument. This tone is intended to accompany the soloist as a secondary voice.

Because the performer will perform at differing tempi and styles, they will have unique movements to be picked up by the Cyberinet. This will result in an ethereal accompaniment that is unique to every performance.

#### Program Note:

It is impossible to do anything in a complete vacuum. Others affect you, you affect others. How will you respond to these unexpected interactions?

#### Performance Notes:

Tempi are all approximate, and the performer can perform the piece at any desired tempo. Accelerando and Rallentando should still happen at the indicated places, but the amount can vary. The goal is a uniquely paced performance; no two should be identical. The performer should experiment with the speed and size of the gestures in order to find an effect amount that they prefer.



# Ethereal Presence

## For the Cyberinet

Matthew A. Bardin (2023)

**Slowly. tempo ad lib.** (♩ = approx. 50–72)

**Cyberinet**

**Electronics**

**H** ----- **H**

**ff**

**ff**

**p**

**mf**

**rall.**.....

**mf**

**f**

**ff**

**A**

Musical score for section A. The staff features a treble clef and a key signature of one flat. The melody begins with a half note B-flat, followed by a quarter rest, then a half note B-flat, and a quarter rest. The dynamics are marked *mp* (mezzo-piano) and *pp* (pianissimo). The score includes a wavy line indicating a tremolo or vibrato effect.

**B****a tempo I**

Musical score for section B. The staff features a treble clef and a key signature of one flat. The melody begins with a half note B-flat, followed by a quarter rest, then a half note B-flat, and a quarter rest. The dynamics are marked *ppp* (pianississimo) and *f* (forte). The score includes a wavy line indicating a tremolo or vibrato effect.

**accel.****a tempo**

Musical score for section C. The staff features a treble clef and a key signature of one flat. The melody begins with a half note B-flat, followed by a quarter rest, then a half note B-flat, and a quarter rest. The dynamics are marked *mp* (mezzo-piano) and *ff* (fortissimo). The score includes a wavy line indicating a tremolo or vibrato effect.

Musical score for section D. The staff features a treble clef and a key signature of one flat. The melody begins with a half note B-flat, followed by a quarter rest, then a half note B-flat, and a quarter rest. The dynamics are marked *f* (forte) and *ppp* (pianississimo). The score includes a wavy line indicating a tremolo or vibrato effect.



**C**

*ff* *pp*

*ppp* *mp*

*mf* *f* *ff*

**D**

*mp*

**rall.**..... H-----H

*mp* *f* *ff*

**E** **a tempo**

*ppp* *pp* *p* *mp*

*mf* *pppp* *mp* *pppp*

*ppp* *p* *mf* *pp*

**F****accel.**.....

First system of musical notation for section F. The staff contains a series of chords and single notes, some with accents. Dynamics include *mp*, *mf*, *f*, and *p sub. < f*. There are two 'V' marks in boxes at the end of the system, connected by a dashed line. A wavy line is at the bottom right.

Second system of musical notation for section F. The staff continues with chords and notes. Dynamics include *ff sub.*, *p*, and *f sub.*. A wavy line is at the bottom right.

Third system of musical notation for section F. The staff continues with chords and notes. Dynamics include *mf* and *p*. The text **a tempo** is written above the staff.

Fourth system of musical notation for section F. The staff continues with chords and notes. Dynamics include *pp*, *ppp*, and *pppp*. A box with the letter **G** is at the end of the system.

First system of the musical score. The treble clef staff features a melodic line with a slur over a series of eighth notes, including a flat. Above the staff, two 'V' marks in hexagons are connected by a dashed line. The bass clef staff has a single note with an accent and a dynamic marking of *mp*. A large crescendo hairpin spans the system, starting at *pppp* and ending at *p*. The system concludes with a fermata over a note in the treble staff.

Second system of the musical score. The treble clef staff continues the melodic line with a slur. Above the staff, two 'V' marks in hexagons are connected by a dashed line. The bass clef staff has a single note with an accent and a dynamic marking of *pp*. A large crescendo hairpin spans the system, starting at *pppp* and ending at *f*. The system concludes with a fermata over a note in the treble staff.

Third system of the musical score. The treble clef staff features a melodic line with a slur. Above the staff, a box containing the letter 'H' is followed by a dotted line. The bass clef staff has a single note with an accent and a dynamic marking of *mf*. A large crescendo hairpin spans the system, starting at *mf* and ending at *f*. The system concludes with a fermata over a note in the treble staff.

Fourth system of the musical score. The treble clef staff features a melodic line with a slur. Above the staff, two 'H' marks in hexagons are connected by a dashed line. The bass clef staff has a single note with an accent and a dynamic marking of *f sub.*. A large crescendo hairpin spans the system, starting at *f sub.* and ending at *ff*. The system concludes with a fermata over a note in the treble staff.

[illegible]