

**Jason Freeman**

# **Saxophone Etudes (2012)**

**for solo saxophone (any voice)**

**with audience participation via mobile phones**

## **Performance Guide**

## **About the Piece**

In Saxophone Etudes, the concert audience influences the music played by the saxophonist during each live performance. Audience members use their smartphones to collectively shape musical factors such as tempo, dynamics, and articulations. The input from the audience is displayed to the saxophonist on a laptop screen, guiding her decisions as she plays the score. In this manner, audience members collaborate with the saxophonist and with each other to shape the music played in each unique performance.

Saxophone Etudes uses massMobile, a smartphone participation system developed by Jason Freeman, Stephen Garrett, Nathan Weitzner, Yan-Ling Chen, Shaoduo Xie, Weibin Shen, Anosh Daruwalla, and Sriram Viswanathan at the Georgia Tech Center for Music Technology. Its development was supported in part by a grant from the National Science Foundation as part of a larger research project on musical improvisation in performance and education (NSF CreativeIT #0855758). It was written for Jan Berry Baker.

## **Duration**

Approximately 8 minutes

## **Instrumentation**

Saxophone Etudes is written for any solo saxophone voice (soprano, alto, tenor, bari, etc.). The score is notated in written pitch.

It requires at least one audience member to participate in its performance via smartphone or laptop.

## **Participation**

Audience members should load the following URL from the web browser on their device to participate:

<http://bit.ly/saxes>

Smartphone users with QR code readers can scan this code instead:



Both the URL and QR code should be printed in program booklets.

## **Technical Requirements**

*The saxophonist needs:*

- Any Mac or Windows laptop. The laptop should be onstage at a comfortable height for reading during performance.
- Internet access for the laptop (e.g. Ethernet, WiFi, or a 3G or 4G connection shared from a mobile phone).

*Each participating audience member needs:*

- A recent smartphone (e.g. iOS, Android, Windows Phone, etc.) or a laptop computer.
- An Internet connection (3G, 4G, or WiFi).

*Just to be clear, the following are NOT needed:*

- No PA or audio equipment.
- No WiFi access for audience smartphones (as long as 3G or 4G signals are available in the concert hall).
- No additional computers besides the saxophonist's laptop. (Our server is hosted in the cloud.)

It is also not necessary that all audience members have smartphones and participate.

## **Installing the Saxophone Etudes Software**

Visit <http://www.jasonfreeman.net/saxophoneetudes/> to download the free performance software for Mac or Windows. Simply double-click the application to launch it, and follow the on-screen instructions.

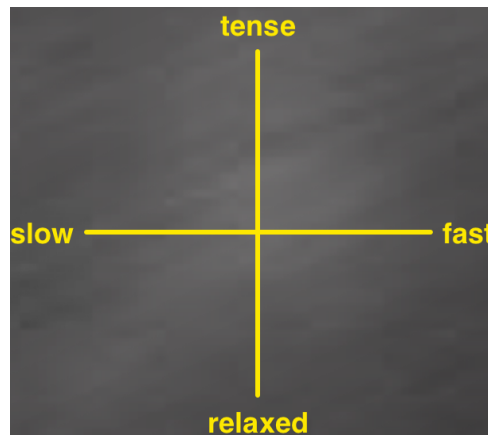
The software also includes a simulation mode that will simulate live audience input, facilitating practice of the piece.

## The Music

### 1. Harmony

This etude consists of twelve measures. Each measure includes 2, 3, or 4 noteheads. You should play each measure for approximately 15-20 seconds before moving to the next.

Audience members will be asked to decide how slow or fast and how relaxed or tense they want the music to be. They select their preference by touching a location on a two-dimensional crosshairs-style interface:



They can change their preference at any time by touching a different point. They can also view the points selected by other audience members.

Your laptop screen will show the same crosshairs-style interface with the data from the audience. More importantly, it will show five slider bars that give more specific suggestions about how to play the music based on the audience data:

- **Note Repeat Speed** (long tones -> as fast as possible). At one extreme, play long tones. At the other extreme, play notes as fast as possible. This slider bar is based on the median of the audience's slow-fast data.
- **Dynamics** (pianissimo -> fortissimo). At one extreme, play all notes pianissimo. At the other extreme, play all notes fortissimo. This slider bar is based on the median of the audience's relaxed-tense data.
- **Durations** (random -> constant duration). At one extreme, the duration of each note should be different from the last, with no sense of beat or meter. At the other extreme, all notes should be of equal duration. This slider bar is based on the amount of variation amongst audience members' slow-fast data: the more variation, the less consistent the note durations.
- **Pitch Changes** (never change notes -> always change notes). At one extreme, play just one pitch from the measure repeatedly. At the other extreme, each note you play should be a different pitch from the last one. This slider bar is based on the amount of variation amongst audience members' relaxed-tense data: the more variation, the more frequently the choice of pitch changes.

- **Articulations** (legato -> frequent accents). At one extreme, play all notes as legato as possible. At the other extreme, introduce frequent accents and other special articulations (such as key clicks or slap tongues). This slider bar is based on the median of the audience's slow-fast and relaxed-tense data: the more tense and the faster, the more special articulations are added.



**note repeat speed**  
(long tones -> afap)



**dynamics**  
(pp -> ff)



**articulations**  
(legato -> lots of accents)



**durations**  
(random -> constant)

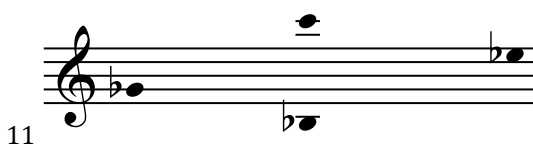
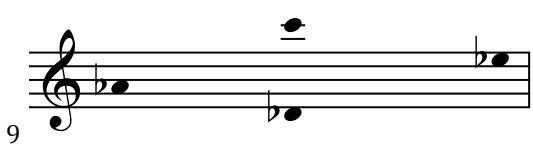
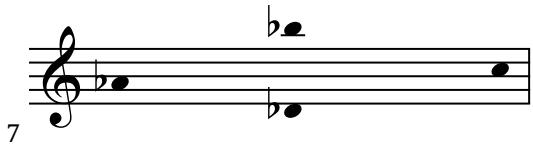
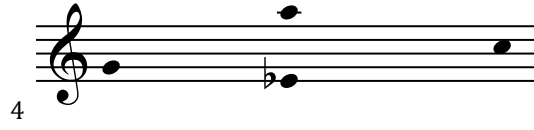
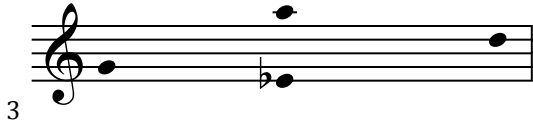
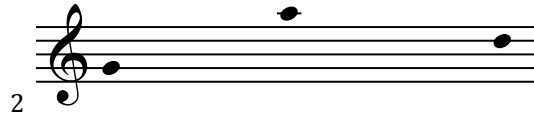


**pitch changes**  
(never -> always)

Take breaths whenever you need to, omitting some notes you might otherwise play as necessary.

Make sure that you do not follow the slider bars slavishly; focus on crafting what you play into larger musical phrases that cohere to make a compelling and expressive performance. You may also think of your job as not just responding to the audience data but also influencing the audience. For example, if you heighten the level of tension in your playing, the audience may respond in turn by increasing their tension levels as well. Or they may push against what you have done by moving more towards the relaxed end, encouraging you to pursue a different interpretive direction.

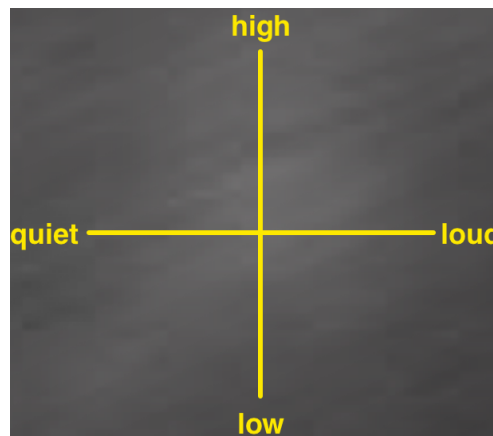
Here are the twelve measures of music:



## 2. Melody

This movement consists of eight one-measure melodic motives. Each measure contains a motive that is to be repeated over and over again until another measure appears on the laptop screen to play. The measures are not necessarily played in order, and each measure may repeat many times over the course of a performance (or may not appear at all). Total duration for this movement is 3-5 minutes.

Audience members will be asked to decide how quiet or loud and how low or high they want the music to be. They select their preference by touching a location on a two-dimensional crosshairs-style interface:



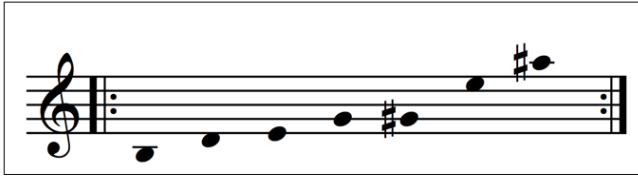
They can change their preference at any time by touching a different point. They can also view the points selected by other audience members.

Your laptop screen will show the same crosshairs-style interface with the data from the audience. More importantly, it will show four slider bars that give more specific suggestions about how to play the music based on the audience data:

- **Dynamics** (pianissimo -> fortissimo). At one extreme, play all notes pianissimo. At the other extreme, play all notes fortissimo. This slider bar is based on the median of the audience's quiet-loud data.
- **Articulations** (legato -> frequent accents). At one extreme, play all notes as legato as possible. At the other extreme, introduce frequent accents and other special articulations (such as key clicks or slap tongues). This slider bar is based on the variation amongst audience members' quiet-loud data: the more variation, the more frequently there are accents.
- **Tempo** (slow -> fast). At one extreme, play eighth notes at quarter = 52. At the other extreme, play sixteenth notes at quarter = 144. This slider bar is based on the median of both audience quiet-loud and low-high data: as the data gets louder and higher, the music gets faster.
- **Rubato** (no rubato -> lots of rubato). At one extreme, play all notes completely evenly. At the other extreme, play with generous rubato. This slider bar is based on the variability of audience quiet-loud and low-high data: the more variation, the more rubato.

It will also show the measure of music you are to play (measure 1 -> measure 8). This is based on the median of the audience's low-high data.

measure  of 8



**dynamics**  
(pp -> ff)

**articulations**  
(legato -> lots of accents)

**rubato**  
(no rubato -> lots of rubato)

**tempo**  
(slow -> fast)

Take breaths whenever you need to, omitting some notes you might otherwise play as necessary.

Make sure that you do not follow the slider bars slavishly; focus on crafting what you play into larger musical phrases that cohere to make a compelling and expressive performance. You may also think of your job as not just responding to the audience data but also influencing the audience. For example, if you heighten the level of tension in your playing, the audience may respond in turn by increasing their tension levels as well. Or they may push against what you have done by moving more towards the relaxed end, encouraging you to pursue a different interpretive direction.

It is up to you — not the audience — to decide when to end. To bring the music to a convincing close, it is permissible to ignore some (or even all) of the audience data in the closing moments of the performance. At the end, you may wish to hold the first or last note of the measure with a fermata.



Here are the eight measures of music:

1



2



3



4



5



6



7



8



## **Getting Help and Getting in Touch**

This piece was designed to be “plug and play” so that it would be easy to perform in any concert hall with little or no advance setup and minimal technical expertise.

Nevertheless, please do not hesitate to contact me with technical questions, bug reports, or other issues. I would also love to hear about your experiences with the piece.

I can be reached via:

<http://www.jasonfreeman.net/contact/>

Most importantly, have fun!

Jason Freeman

Atlanta, Georgia

July 28, 2011

revised December 5, 2012