

# clarinet

## Clarinetist's guide

music of expression  
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# clarinet: Clarinetist's guide

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# clarinet Orientation

Welcome to **clarinet**!

**clarinet** is a performance instrument for the iPhone. It is a musical instrument in the same vein as a MIDI keyboard, in that it enables you, the musician, to play musical sounds and control other MIDI instruments.

**clarinet**'s controls are based upon the principles of a real clarinet. You can adjust this control to include breath, touch, and/or tilt control.

**clarinet** includes a sound engine that plays sound samples of a Bb clarinet, an orchestral A clarinet, the smaller Eb clarinet, and the large Bb bass clarinet. You can play the whole range of the two registers of the clarinet smoothly with the result sounding satisfying and realistic.

Like all **music of expression instruments**, **clarinet** includes the Visual Synth. You can create your own sounds with this "additive" synthesizer, adding reverb, tweaking the low-pass filter, and sculpting the characteristic of the sound wave.

You can control MIDI wirelessly with **clarinet**. That means you can control Reason, Logic, Garageband, SONAR, and any number of other MIDI applications that include more advanced synthesizers and samplers that take advantage of the power of your home computer.

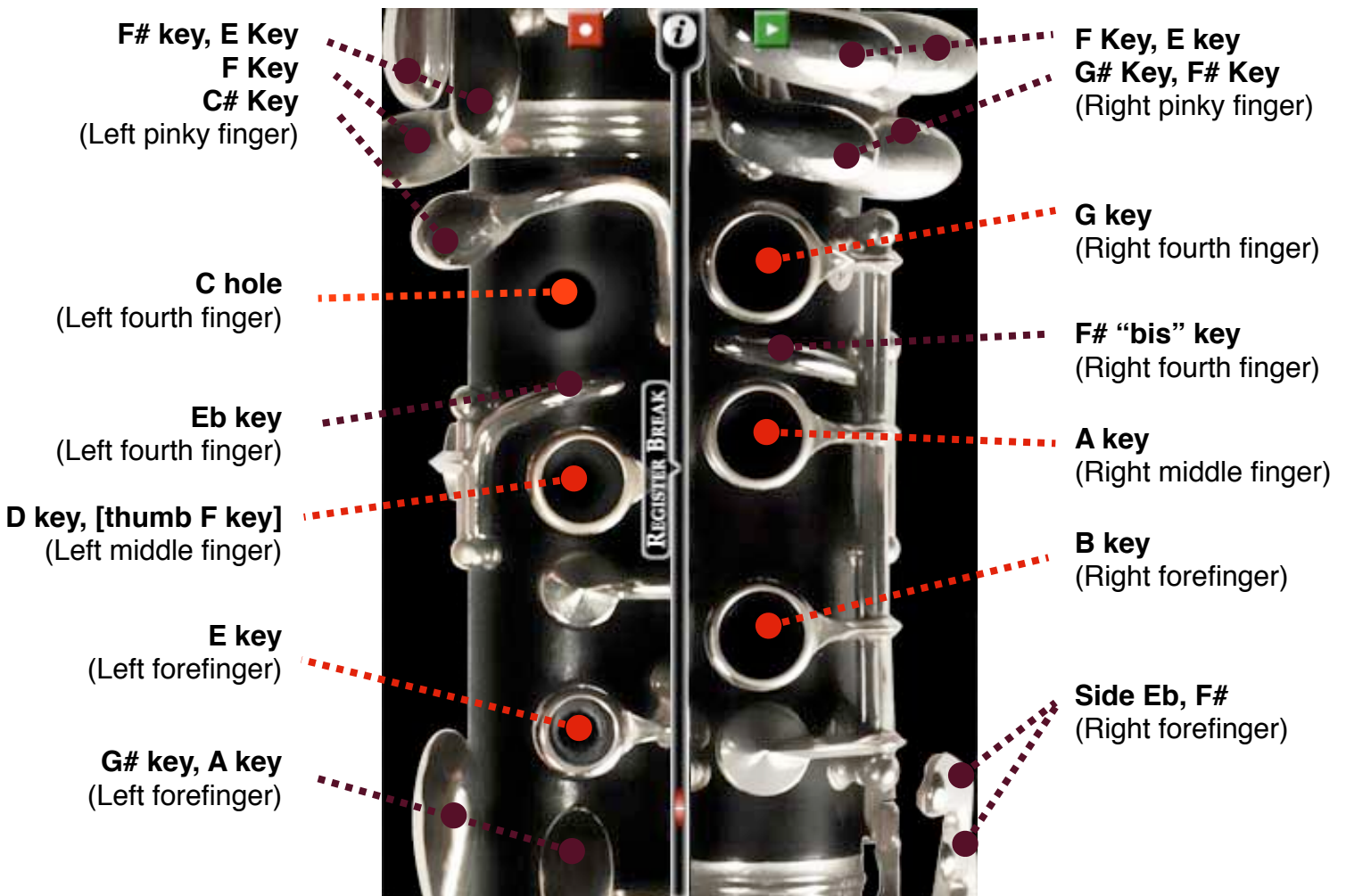
Finally, you can record your **clarinet** playing and upload it online. You can download other **clarinet** performances and play them, and watch how the performer has played as the interface animates just as he or she did during the recording. You can also head to **musicofx.com** to check out performances in your browser, send them in emails, or embed them in your blog!



# Playing clarinet

**clarinet**'s controls are based upon the principles of a real **clarinet**. Pitch is controlled by the keys on the instrument. As the player covers the holes on the left, and then the right, the air must travel further, generating a lower pitch.

To play lower pitches, put down the fingers of your left hand, fore, middle, fourth fingers, then the fingers of the right hand, fore, middle, fourth and pinky fingers, in the red positions.



**[!] Note:** The iPhone only supports five touches at a time -- so the rule is that if you're using any keys on the right side, you can let go of the left side, and vice versa. (There are a couple exceptions, listed in the **Fingerings** section.)

**[!] Note:** If **clarinet** is placed on a surface, you might need to have at least a thumb touching the outside of the device somewhere, otherwise the iPhone's multi-touch sensors might not catch all your touches.

To hold **clarinet**, we suggest propping the bottom against a desk, knee, or table, perhaps using a pinky to hold it at the bottom.

# Fingerings (Chalumeau register)

The fingering chart displays which keys to depress to play which notes. **clarinet** in fact has more fingerings that “work” -- for example, to play D, you only need to have D pressed; F and E are effectively optional. For the lowest notes, only one of the two pinky keys indicated is required.

Also, due to the fact that not all of the keys on a real clarinet would fit on the iPhone’s screen, some keys do double duty: the left D key is also the thumb key; and the G and and pinky keys will trigger an “open” (no keys pressed) C# when in Touch mode.

**[!] Note:** The device only supports five touches at a time -- so the rule is that if you’re using any keys on the right side, you can let go of the left side, and vice versa.

The first system shows musical notation for notes: D4, E4, F4, G4, A4, B4, and C#5. Below each note is a fingering chart showing the positions of the left and right hands on the keys. The left hand keys are numbered 1-4, and the right hand keys are numbered 1-5. Shaded circles indicate which keys are to be pressed for each note.

The Eb key here can be played with the left middle finger -- you don’t need to hold down the D key, too.

The second system shows musical notation for notes: D4, E4, F4, G4, A4, B4, and C#5. Below each note is a fingering chart. A line points from the text to the Eb key in the second measure, indicating that the left middle finger can be used to play it without needing to hold down the D key.

Note how the thumb F is substituted by the D key here, and the thumb Bb is substituted by the D key also.

The third system shows musical notation for notes: D4, E4, F4, G4, A4, B4, and C#5. Below each note is a fingering chart. Lines point from the text to the F and Bb keys in the first measure, indicating that the D key is used as a substitute for these thumb keys.

# Fingerings (Clarion register)

In the second register, the fingerings are the same, and the notes are transposed up a twelfth -- an octave plus a fifth.

**[!] Note:** The device only supports five touches at a time -- so the rule is that if you're using any keys on the right side, you can let go of the left side, and vice versa.

The Eb key here can be played with the left middle finger -- you don't need to hold down the D key, too.

Note how the thumb F is substituted by the D key here, and the thumb Bb is substituted by the D key also.

## Register breaks

The keys give complete control over the pitches within a diminished twelfth, from low E to middle Bb. To change octaves, real clarinets have an “register key” at the left thumb. **clarinet** uses the iPhone’s tilt sensor and the register slider to achieve the same effect.

Simply tilt **clarinet** away from you, so that the outer edge of the phone is pointing more downwards, and the red register indicator will move up the **register track**. When it passes an **Register Break slider**, the resulting pitch will shift from one register to the other, rising or falling a perfect twelfth.

The Register Break and **Register Flex slider** are adjustable, so you can customize how you want **clarinet** to respond depending on your posture and your preferred way of holding **clarinet**. Simply touch the Register tabs and drag up or down to adjust them.

### Tilt-Flex Control

The **Tilt-flex** option is an advanced control method for smoother, faster playing. The idea is that you smoothly tilt **clarinet** as the pitches you play rise and fall. The register indicator is an analogy for embouchure, where certain lip pressures and throat and tongue alignments predispose the instrument to play certain pitches.

Under this control method, the register mark where a middle Bb is most “stable”. The closer you are to the middle Bb, the closer you want the register indicator to be to the Register Break slider.

Adjusting the Register Flex slider will widen or narrow the tilt range of the registers. A wider range will require more tilting of the device for register shifts, and vice versa. The tilt range of the two registers will be highlighted, seen in the screenshot above.

When the register indicator is at a slider, pitches further from Bb are less stable and closer to jumping the break. G at the top of the staff is half a register away from middle Bb, so when you want to play a G at the top of the staff, tilt **clarinet** so that the indicator is half a register’s width beyond the register break. Similarly, if you want to play a low F, tilt so that the indicator is well before the register slider.

Therefore, the way to play with Tilt-flex on is to try to have the indicator match up with the note you’re playing. Notes near Bb are stable near the Register Break, notes below Bb, before the break, and notes above, after the break. Whether “before” and “after” mean above or below



depends on whether or not “**Reverse register breaks**” is on in the options -- by default, “before” is above and “after” is below.

The result is that you can smoothly play scales and arpeggios up all three octaves of **clarinet** by smoothly tilting it forward and back, and pressing the appropriate keys. See a demo of Tilt-Flex control at <http://musicofx.com/clarinet.php>.

## Configuring clarinet control

Press the (i) info button to access the **clarinet** control configuration screen.

**Volume control** refers to how you will control the loudness of **clarinet**. [**Breath**] enables you to blow into the iPhone’s speakerphone mic or a connected headset’s mic. [**Touch**] means **clarinet** will play whenever you press a key. (Remember open C# plays if you press the low C or Eb keys.)

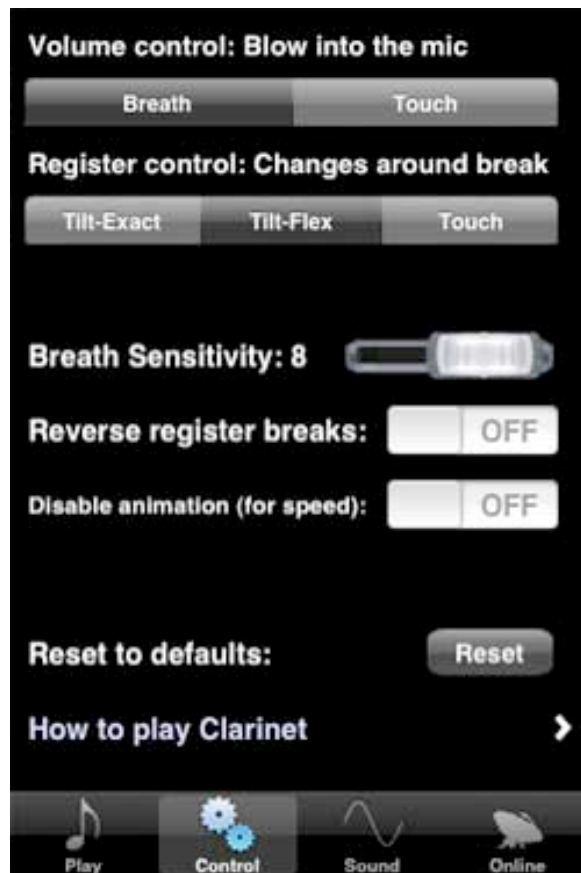
Register control refers the control of the register breaks of the **clarinet**. [Tilt-exact] means the register always changes when you tilt it past an register slider. [Tilt-flex] means the registers shift around the slider; pitches change according to their distance from middle Bb. (See explanation above.) [Touch] means tilt is off, and you drag the register slider to specify your octave.

**Breath Sensitivity** allow you to tweak how quickly the iPhone will react to breath control.

**Enable animation** is by default set to ON, but you can turn it off to give **clarinet** that extra performance edge. For when advanced players want to play advanced stuff!

Press **Reset** to restore **clarinet** to the settings it had when you first installed it.

**How to play clarinet** will open this manual.





# clarinet's Sound

**clarinet** includes four sample sets, featuring the standard Bb clarinet, an orchestral A clarinet, the Eb clarinet, and the Bb bass clarinet. These sounds were recorded from a real musician playing real instruments, and **clarinet**'s sound engines knits together the recordings to create a smooth and realistic result when you play **clarinet**.

Access the sound control view by pressing the (i) button and selection the Sound tab.

Select [**Clarinet**] to play with the sampled clarinets. The **Octave** and **Key** settings will automatically set. (You can still change them.)

Changing the **Octave** setting will raise or lower the pitch of **clarinet** by the number of octaves you select.

Similarly, **Key** will alter the tuning of **clarinet**. Setting **Key** to Bb means playing a C on **clarinet** results in a concert Bb, or down a whole step. A Eb setting would transpose **clarinet** up three half steps.

**Tuning** adjusts the micro-tuning of **clarinet**.

**Portamento** refers to how fast the pitches change from one to another. A high **Portamento** creates a sliding, glissando sound, while a low **Portamento** can sound unnatural and machine-like.

**Reverb** is the level of echo in **clarinet**'s sound. High **Reverb** values simulate a large hall or church, while a low **Reverb** simulates a sound booth or small room.



# The Visual Synth

Select [**Synth**] in the sound control bar to reveal the synth interface.

**clarinet** includes music of expression's Visual Synth. This is an additive synthesizer that can combine up to two customized waveforms that you have designed yourself. Both Synth 1 and Synth 2 can be configured with their own tunings and wave characteristics.

Each Synth is set to a waveform type. [Sine] refers to a gentle S curve and creates softer, more organic sounds. Triangle creates a zig-zag wave like a mountain range, and Square creates a wave with corners, like a cityscape.

In the **Sound Spectrum** window you can configure the strength of each overtone node. A node at the bottom of the window means that overtone is not being played, while a node dragged to the top will accentuate that overtone as much as possible. Not sure what that all means? Feel free to explore and experiment!

**Filter** applies a low-pass filter to the entire sound. The higher you set the filter, the less "edgy" the resulting sound.

**Synth 1-2 Bal** refers the balance between Synth 1 and Synth 2. Dragging this all the way to one side or the other will mean you hear only one synth, while middle settings mix the two. Notice that the color of the **Synth 1-2 Bal** label changes depending on the mix. The bluer it is, the more Synth 2 is in the mix.

Again, **Portamento** refers to how fast the pitches change from one to another.

**Reverb** is the level of reverberation (echo) in **clarinet's** sound.



# MIDI

**clarinet** can control MIDI instruments and MIDI-powered software, including Logic, SONAR, Reason, Garageband, and more. With the help of the musicofx MIDI tool, available at musicofx.com, you can use **clarinet** to take advantage of all the myriad synthesis options your music studio offers.

To use **clarinet** as a MIDI instrument, select the [MIDI] option in the Sound control bar.

The basic tuning options **Octave** and **Key** remain, and will affect the pitch being sent to your MIDI setup.

**moxChannel** refers to the moxChannel in the musicofx MIDI tool. The musicofx MIDI tool accepts up to 8 individual connections, identified by their moxChannel.

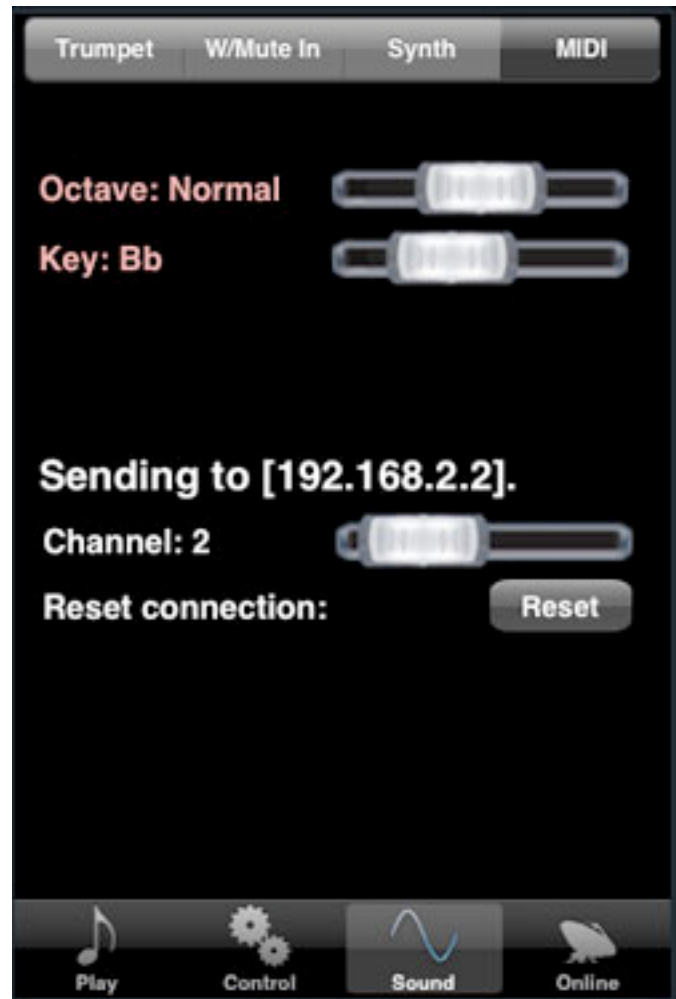
**Reset** connection will terminate any existing MIDI connection and try to establish a new one.

When **clarinet** is searching for a new connection, the text “**Searching for connection...**” will be displayed. When it is connected, the text “**Sending to [192.168.1.104]**” will be displayed (with your IP address substituted in.)

Additionally, in the instrument view, an icon will be displayed in the upper-right hand corner of the interface indicating the status of the MIDI connection.

You can get musicofx MIDI tool on the musicofx website --

(<http://www.musicofx.com/midi-tool.php>) where you can also find more information on configuring your computer setup for music of expression instruments, including video demos and tutorials.



# clarinet Online

**clarinet** has the same online sharing options included in other music of expression instruments. Not only can you record and play your own recordings, but you can download others' performances, listen to them, and rate them as you like.

To record yourself playing, press the red Record button in the Instrument View. Press either the red Record button or the green Play button to finish the recording.

The recording will be saved if it is longer than 5 seconds. You can only save up to 8 recordings on your device, so be sure to upload your best takes online!

In the Online tab, you can see your saved recordings. Access the Online tab by pressing the (i) button in the Instrument View.

The **red "X"** deletes the recording.

The **blue arrow** uploads the recording.

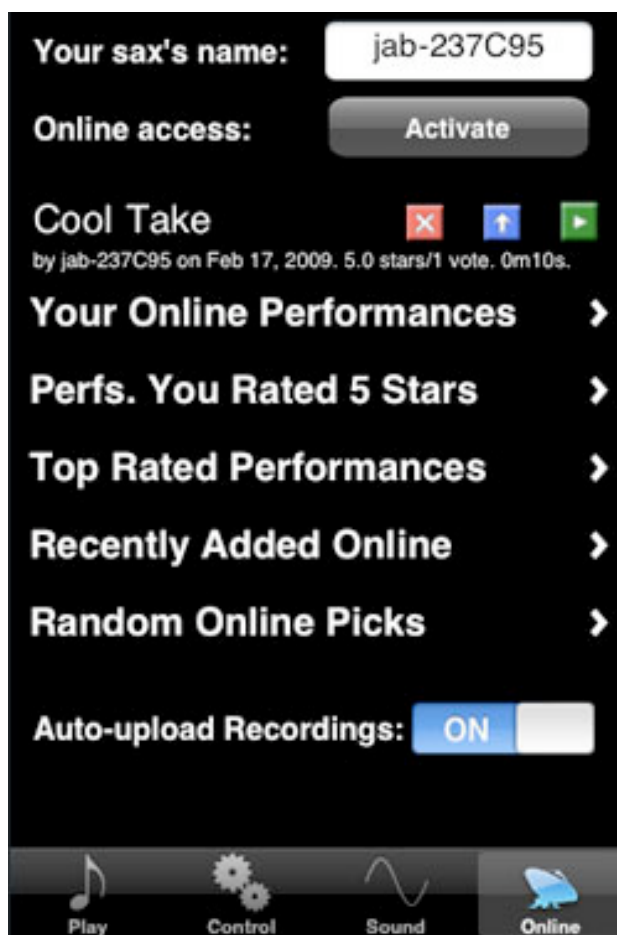
The **green triangle** play button will play the recording back. After listening to a recording, you will be prompted to vote on it automatically.

Selecting anywhere else on the recording will bring up the **Recording Info** view. (See below).

If **Auto-upload Recordings** is on, the recording will be uploaded and saved on the musicofx servers.

The folders "**Your Online Performances**", "**Top Rated Performances**" and so on let you explore the online performances.

Press **Activate** to activate your instrument's name online and get your online login code. You can use this code to log in to the forums at musicofx.com in addition to tracking all your saved online recordings. You can use this button to change your username, too. Your other musicofx instruments installed on that device will automatically adjust to that name as you use their online functions.

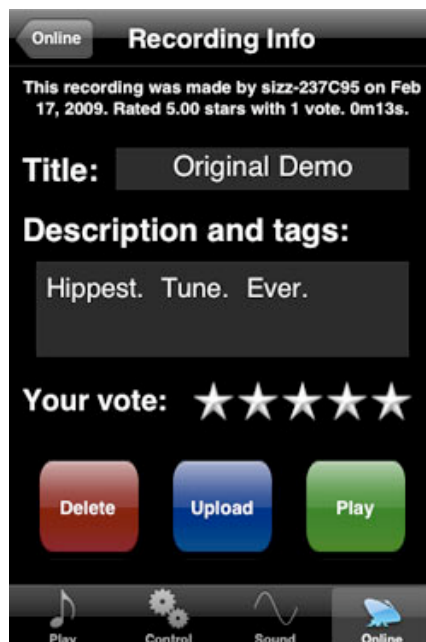


The **Recording Info** view shows the recording's attributes up close. Here, you can edit the title and description of your own recordings, and vote on others'.

Note that in order to vote on a recording, you need to listen to it! After listening to a performance, you'll automatically be prompted to vote on it.

Large versions of the **Delete**, **Upload**, and **Play** buttons have the same effect as the small versions in the **Online** view.

At musicofx.com, you can continue to edit your recordings' information, listen to other performances and vote on them, and get information on how to email links to the recordings and embed them in your website or blog.



## Beyond clarinet...

**clarinet** is only one of a series of instruments in the music of expression series. These instruments are great for learning the principles of their real-life counterparts, and they're powerful enough to be expressive tools for musicians who already have some understanding.

music of expression's series of instruments currently includes:

**TRUMPET** - the first in our series of instruments, simulating a brass trumpet.

**clarinet** - toot away on this instrument -- enjoy the woody warmth of the clarinet sound.

**TROMBONE** - a slide trombone for your iPhone or iTouch!

**flute** - an expressive flute, featuring a variety of flute sample sets.

**Saxophone** - jam out on musicofx's flexible and expressive Saxophone!

Keep an eye on [musicofx.com](http://musicofx.com) as we continue to create the best musical instruments for the iPhone! Thanks for playing **clarinet**, and good luck in your musical adventures!