

TRUMPET

trumpeter's guide

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TRUMPET: trumpeter's guide

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TRUMPET Orientation

Welcome to **TRUMPET!**

TRUMPET 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.

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

TRUMPET includes a sound engine that plays sound samples of a real trumpet, a trumpet with a harmon mute, and a flugelhorn. (The flugelhorn has a deeper voice, made famous by the likes of Chuck Mangione and Clark Terry.) You can play the whole range of the trumpet smoothly with the result sounding satisfying and realistic.

Like all **music of expression instruments**, TRUMPET 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 TRUMPET. 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 TRUMPET playing and upload it online. You can download other TRUMPET 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 TRUMPET

[!] Note: If TRUMPET 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. (Weird, huh?)

TRUMPET's controls are based upon the principles of a real trumpet. Simply put, two things control pitch: lip pressure and the valves.

Lip pressure is simulated by the **musical staff**: it selects the "overtone" of the fundamental. This overtone is called a **partial**.

(The Bb partial is omitted in TRUMPET as it is seldom used in real practice.)



While that is enough to play some music, it would be nice to reach the pitches between the overtones! That's where the **valves** come in.

The valves change the effective length of the trumpet, changing its "fundamental" pitch.

The **first valve**, nearest to the player, at the bottom of the iPhone's screen, lowers the fundamental pitch by two steps.

The **second valve** lowers it by one step.

The **third valve** lowers it by three steps.

Combining more than one valve adds their values together, such that depressing the second and third valves lowers the pitch by four steps. So depressing the first and second valves (two + one step) is equivalent to depressing the third (three steps).

A comprehensive table of fingerings for each note is in the **Fingering** section.

The details of controlling the lip pressure/selecting the partial is explained in the next session, the **Control Interface**.

The play and record buttons control recording and playback, see TRUMPET Online for more information on what to do with recordings.



You can hold TRUMPET by placing it on the table, tipping it up from the table, or in your hand. We recommend the following posture for holding it in your hand: use your left thumb and third finger holding the left corners of the device, and use your left forefinger to select from the partial scale. Then rest the phone on your right thumb and use your forefinger, middle finger, and ring finger to play the valves.

Configuring TRUMPET control

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

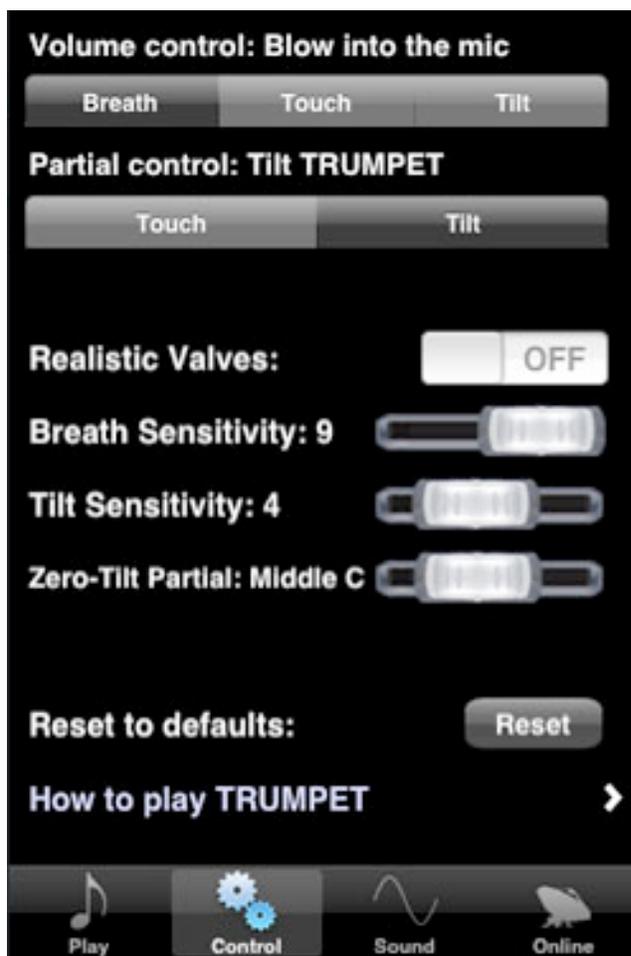
Volume control refers to how you will control the loudness of TRUMPET. [Breath] enables you to blow into the iPhone's speakerphone mic or a connected headset's mic. [Touch] enables a volume scale. [Tilt] controls TRUMPET's volume when you tilt it.

Partial control refers to the control of the partial, or overtone, of the trumpet. [Breath] means the harder you blow, the higher the partial. [Touch] lets you touch the partial scale to select one. [Tilt] controls is through tilting the device.

Turning on **Realistic valves** will make the valve fingerings be more true to a real trumpet's. Given the valves selected, the resulting pitch is chosen to best fit the simulated mouthpiece pressure indicated by the partial scale.

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

Zero-Tilt Partial refers to the partial that will be selected when the device is flat and [Tilt] control is selected under **Partial Control**.



Note that selecting [Touch] for both **Breath Control** and **Partial Control** will enable an all-touch mode. Touch the partial scale to “blow” trumpet and release the touch to silence it.

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

How to play TRUMPET will open this manual.

TRUMPET's Sound

TRUMPET includes three samples sets, a trumpe, a trumpet with a harmon muted inserted, and a flugelhorn. These sounds were recorded from a real musician playing real instruments, and TRUMPET's sound engines knits together the recordings to create a smooth and realistic result when you play TRUMPET.

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

Select [Trumpet] to play with the sampled trumpet, muted trumpet, or flugelhorn. The **Octave** and **Key** settings will automatically set. (You can still change them.)

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

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

Tuning adjusts the micro-tuning of TRUMPET.

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 TRUMPET'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 view to reveal the synth interface.

TRUMPET 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.

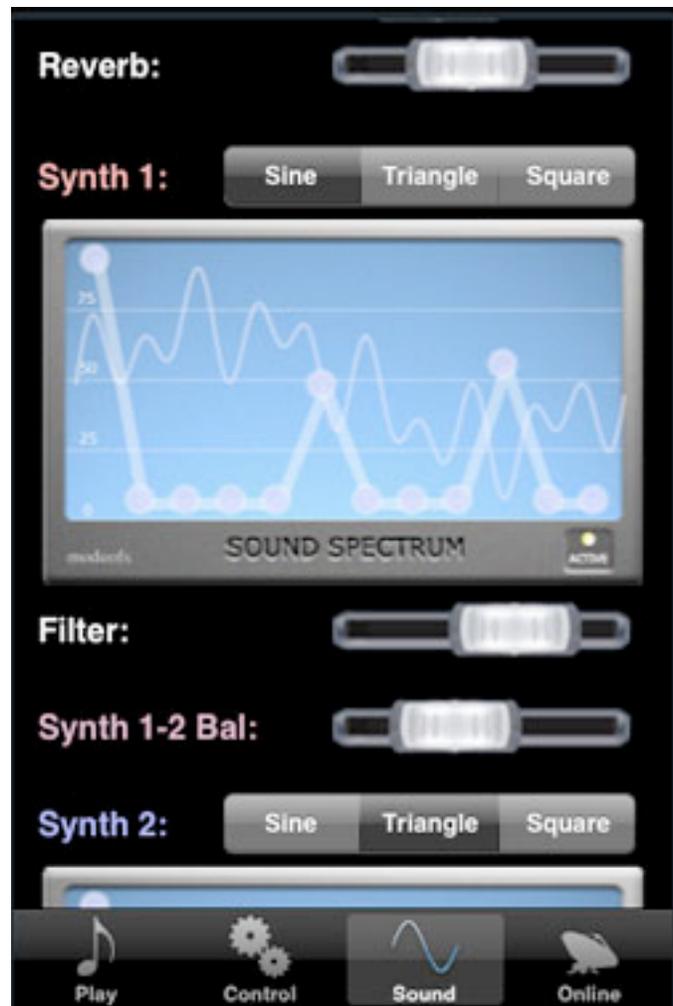
In the **Sound Spectrum** window you can configure the strength of each overtone node. A node at the bottom of the window means that overtone is not being played, while a node dragged to the top will accentuate that overtone as much as possible. Not sure what that all means? Feel free to explore and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



MIDI

TRUMPET 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 TRUMPET to take advantage of all the myriad synthesis options your music studio offers.

To use TRUMPET as a MIDI instrument, select the MIDI option in the Sound tab.

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

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

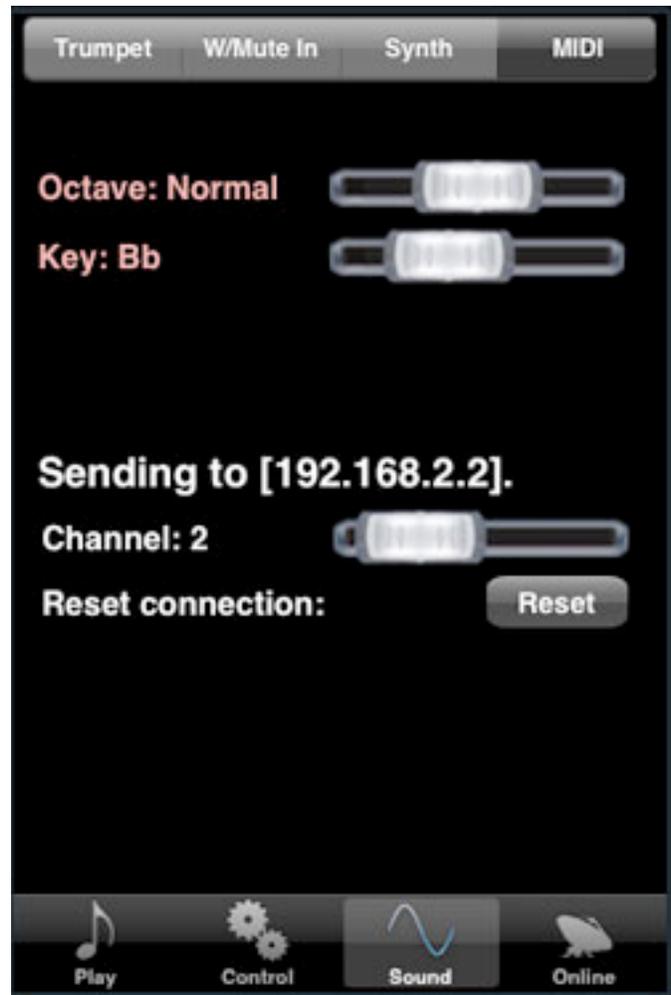
Reset connection will terminate any existing MIDI connection and try to establish a new one.

When TRUMPET 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.



TRUMPET Online

TRUMPET 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.

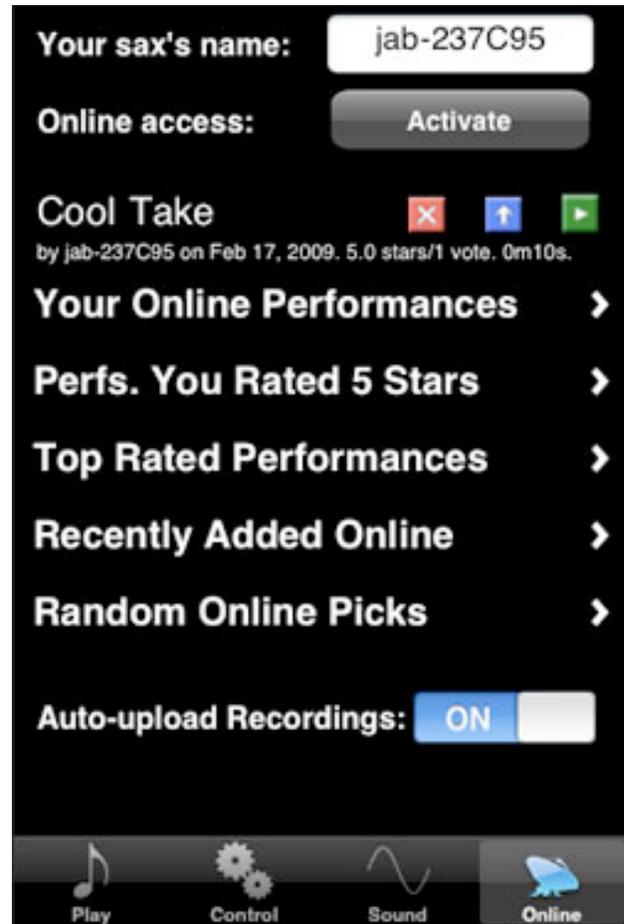
The **green triangle** play button will play the recording back. After listening to a recording, you will be prompted to vote on it automatically.

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.

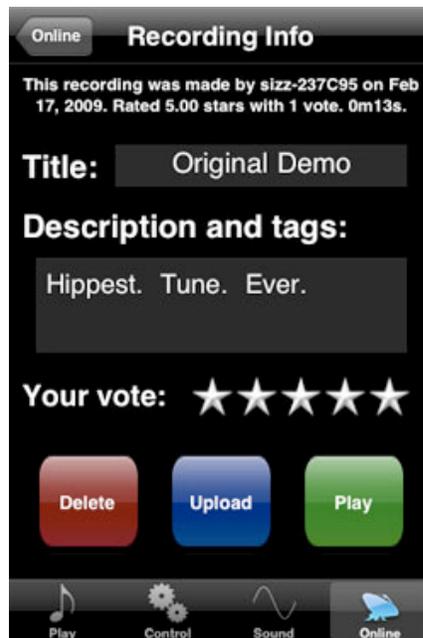


The **Recording Info** view shows the recording's attributes up close. Here, you can edit the title and description of your own recordings, and vote on others'.

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 TRUMPET...

TRUMPET 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 as we continue to create the best musical instruments for the iPhone! Thanks for playing TRUMPET, and good luck in your musical adventures!