SONiVOX

User Guide

Introduction

Thank you for purchasing Vocalizer Pro! Vocalizer Pro transforms vocals and instruments with a revolutionary new patent-pending technology. Just step up to the mic and let go—the results are astounding, and not to mention a ton of fun. Speak, sing, whisper, yell, or even run your drum tracks or anything else through it, Vocalizer Pro will take your source input apart and pitch, harmonize, de-harmonize, modify, fortify, enhance, re-fry, re-synthesize, and reassemble to your imagination's outermost limit.

The foundation for this instrument comes from Vocalizer, SONiVOX's groundbreaking original vocoder instrument. Vocalizer Pro has a number of new features, such as FFT audio processing and a new set of live performance controls in the Parameter Snapshot Pads and Chord Pads enabling even greater control and playability.

Vocalizer Pro is available as a VST™, AU and RTAS® plug-in for 32-bit and 64-bit Mac® OS X® and Windows® systems.

Credits

Jack O'Donnell, Executive Producer

Jennifer Hruska	Ryan Pietras	Scott Stepenuck	Ishaan Chhabra
Colman O'Reilly	Bobby Zlatkov	Feuler Tovar	David Szebeda
Jason Jordan	Jeremy Bridge	John Teele	Andrew Tomasello
Erik Pearson	Chris Rudzinski	Jamie Billings	Aaron Hachen
Samara Winterfeld	Bryce Kanzer	Katy Cone	

System Requirements and Product Support

For complete system requirements, compatibility information, and product registration, visit the SONiVOX website: **sonivoxmi.com**.

Installation

Windows

1. Right-click the **.zip** file you downloaded and select **Extract All**.
2. Follow the on-screen instructions. By default, Windows will show you the extracted files when it has finished extracting them.
3. Double-click the **.exe** installer file
4. Follow the on-screen instructions.

Note: *Vocalizer Pro uses PACE copy protection, so it will install the PACE InterLok driver on your system if you do not already have it. As most audio software uses PACE copy protection, though, this is probably already installed on your system.*

Mac OS X

1. Double-click the **.zip** file you downloaded. The archive utility will extract the files and put them in a folder in the same location as the **.zip** file.
2. Open the **Vocalizer Pro** folder.
3. Double-click the **.pkg** installer file.
4. Follow the on-screen instructions.

Setup in Your Host Software

Important: Your host software must be able to record both audio and MIDI tracks for Vocalizer Pro to work. Most host software can do this, but some cannot (e.g., GarageBand™).

Here are the basic steps to set up Vocalizer Pro in some popular host software applications.

Avid® Pro Tools®

1. Create or open a Pro Tools Session.
2. Create 1 new audio track named **Vocalizer – Audio**.
3. Create 1 new MIDI track named **Vocalizer – MIDI**.
4. Load an audio clip onto the **Vocalizer – Audio** track.
5. Insert Vocalizer Pro on the **Vocalizer – Audio** track.
6. Route the output of the **Vocalizer – MIDI** track to Vocalizer Pro.
7. Press **Play** in Pro Tools and then play MIDI notes with your connected keyboard controller. The output of your audio track will now be "vocalized."

Ableton™ Live

1. Create or open a Live Set.
2. Create 1 new audio track named **Vocalizer – Audio**
3. Create 1 new MIDI track named **Vocalizer – MIDI**.
4. Load an audio clip onto the **Vocalizer – Audio** track.
5. Insert Vocalizer Pro on the **Vocalizer – Audio** track.
6. Route the output of your **Vocalizer – MIDI** track to your **Vocalizer – Audio** track.
7. Record-enable the **Vocalizer – MIDI** track.
8. Trigger your audio clip in Live and then MIDI notes with your connected keyboard controller. The output of your audio track will now be "vocalized."

Apple® Logic Pro™

1. Create or open a Logic Pro project.
2. Create 1 new audio track named **Vocalizer – Audio**.
3. Create 1 new software instrument track named **Vocalizer – MIDI**.
4. Load an audio clip onto the **Vocalizer – Audio** track.
5. Load Vocalizer Pro onto the **Vocalizer – MIDI** track from the **AU MIDI Controlled Effects** list.
6. Set the **Vocalizer – Audio** track as Vocalizer Pro's sidechain input by selecting it from the drop-down menu in the upper right corner of Vocalizer Pro.
7. Mute the **Vocalizer – Audio** track.
8. Record-enable the **Vocalizer – MIDI** track.
9. Press **Play** in Logic and then play MIDI notes with your connected keyboard controller. The output of your audio track will now be "vocalized."

Steinberg Cubase™

1. Create or open a Cubase Project.
2. Create 1 new audio track named **Vocalizer – Audio**.
3. Create 1 new MIDI track named **Vocalizer – MIDI**.
4. Load an audio clip onto the **Vocalizer – Audio** track.
5. Insert Vocalizer Pro on the **Vocalizer – Audio** track.
6. Route the output of the **Vocalizer – MIDI** track to the **Vocalizer – Audio** track.
7. Record-enable the **Vocalizer – MIDI** track.
8. Press **Play** in Cubase and then play MIDI notes with your connected keyboard controller. The output of your audio track will now be "vocalized."

Cakewalk® SONAR™

1. Create or open a SONAR Project.
2. Go into your **Utilities**.
3. Open the **Plug-in Manager**.
4. Select **Vocalizer Pro** from the list of VST audio effects.
5. Click on the **Plug-in Properties** button under **VST configuration**.
6. Check the **Configure as Synth** box to allow Vocalizer Pro to receive MIDI input.
7. Create 1 new audio track named **Vocalizer – Audio**.
8. Create 1 new MIDI track named **Vocalizer – MIDI**.
9. Load an audio clip onto the **Vocalizer – Audio** track.
10. Insert Vocalizer Pro as an **FX Plugin** on the **Vocalizer – Audio** track.
11. On the **Vocalizer – MIDI** track, assign the MIDI output to Vocalizer Pro.
12. Press **Play** in SONAR and then play MIDI notes with your connected keyboard controller. The output of your audio track will now be "vocalized."

MOTU® Digital Performer®

1. Create or open a Digital Performer project.
2. Create 1 new audio track named **Vocalizer – Audio**.
3. Create 1 new MIDI track named **Vocalizer – MIDI**.
4. Load an audio clip onto the **Vocalizer – Audio** track.
5. Insert Vocalizer Pro on the **Vocalizer – Audio** track.
6. Route the output of the **Vocalizer – MIDI** track to Vocalizer Pro.
7. Record-enable the **Vocalizer – MIDI** track.
8. Press **Play** in Digital Performer and then play MIDI notes with your connected keyboard controller. The output of your audio track will now be "vocalized."

Overview

Vocalizer Pro's graphical interface lets you easily access many of the available settings for its filters and effects. This manual gives an overview of the interface's different sections.

Adjusting the Controls

- **Drop-Down Menus:** Open an available drop-down menu by clicking the downward arrow (▼) to the left of the field (e.g., **Type**, **Filter**, or **LFO**). Click an option to select it.

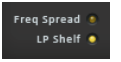
- **Knobs:** Change the position of a knob (e.g., **Freq**, **Q**, **Sat**, **Rate**, **Amt**) by clicking and dragging it up or down. Release it when you reach the desired position. Double-clicking the knob sets it to the 12 o'clock position.

  The knob's numerical value is displayed under the knob. You can double-click this value to manually enter a specific value.

- **Sliders:** Change the position of a slider (e.g., **Input**, **Output**, **Filter Envelope**, **Volume,** or **Glide**) by clicking and dragging it. Release it when you reach the desired position. You can also simply click anywhere along the slider's track, and the slider will "jump" to that position.

- **Switches:** Change the setting of a two-position switch (e.g., **Sync**, **Formant Processing**, or **Snapshot Mode**) by clicking on the opposite side of it.

- **Buttons:** Enable or disable a function with an LED (e.g., **Freq Spread**, **LP Shelf**, or **Learn**) by clicking it.



Global Controls

These sections and controls are visible regardless of which tab you are viewing.

Keyboard

While Vocalizer Pro's processors in the Modulation Tab require the most tweaking, the keyboard is where the action happens.

As your audio signal enters Vocalizer Pro, play the keyboard to determine its pitch and, ultimately, its sonic characteristics (as determined by the processors' various pitch-dependent settings).

Tip: Use the Chord Pads to save and instantly recall your most-frequently used (or impossible-to-play!) chords. See the ***Pads*** section for more information.

The keyboard also uses these controls:

- **Glide:** Adjust the amount of *portamento* (glide between two notes) with the **Glide** slider.
- **Pitch:** Bend the pitch of the keyboard in real time with the **Pitch** wheel.
- **Mod:** Adjust the amount of modulation applied to the notes with the **Mod** (modulation) wheel.
- **Learn:** Click the **Learn** LED to enter Learn Mode, which lets you to assign hardware MIDI controls to Vocalizer Pro's parameters. While in Learn Mode, adjust a parameter or trigger a pad in Vocalizer Pro and then move a knob, slider, or trigger a pad on your hardware MIDI controller. That knob, slider, or pad will now control that parameter or trigger that pad. Click the Learn LED again to exit Learn Mode.

Pads

Vocalizer Pro has two rows of eight pads, allowing you to switch the incoming audio between different presets on the fly. The pads in the upper row—the **Snapshot Pads**—recall "Snapshots" of modulation and effects parameters. The pads in the lower row—the **Chord Pads**—recall keyboard notes and chords.

Snapshot Pads

These eight pads store Snapshots of all parameters. Use the **Snapshot Mode** switch to put these pads in **Recall Mode** or **Edit Mode**:

- **Recall Mode:** In this mode, clicking a pad will call up the Snapshot assigned to that pad. All Vocalizer Pro parameters will immediately "jump" to the values and parameters of that Snapshot.
- **Edit Mode:** In this mode, clicking a pad will call up the Snapshot assigned to that pad, but any subsequent changes you make to the parameters will be saved to that Snapshot.

You can rename the selected Snapshot by double-clicking the Snapshot name field (above the **Snapshot Mode** switch) and entering a new name.

Note: Individual Snapshots are saved as **.psp** files by right-clicking the Snapshot Pad and choosing **Save Snapshot**. The group of eight Snapshots is automatically saved in each Instrument file (**.svx**). Loading a new Instrument will cause the Snapshots to change. You can, however, save your own custom Instruments to mix and match existing and/or new Snapshots.

Chord Pads

These eight pads automatically recall chords you have saved to them. This is a helpful feature if you use certain chords frequently; you can play a chord by pressing a single pad instead of all of its notes. This is also helpful if you want to play chords consisting of notes that you can't physically play with just two hands.

To save a chord to a pad:

1. Click the **Map** button to the right of the pads.
2. Play the pad where you want to assign the chord.
3. Play the notes you want the chord to consist of. The keys in Vocalizer Pro's graphical keyboard will appear "pressed" to indicate they are part of the chord. You can play a note again to remove it from the chord. You can also play the notes simultaneously or one at a time.
4. Click the **Map** button again.

To play that chord, simply play that pad.

To save the current pad layout, click the **Save** button (disk icon) under the **Map** button. Name the pad layout file (**.smp**) and select a location to save it to.

Tip: We recommend saving your pad layout files somewhere in the **SONiVOX ▸ Vocalizer Pro** folder, where Vocalizer Pro's presets, Snapshots, and other pad layout files are stored.

To load a pad layout, click the **Open** button (folder icon) under the **Map** button. Locate and open the pad layout file (**.smp**).

Tip: Check out some pre-made Chord Pad layout files, stored in the **SONiVOX ▸ Vocalizer Pro ▸ Chord Maps** folder.

Formant Processing

Formants are the unique elements of the frequency of a vocal signal. Vocalizer Pro's formant processing features has the following controls, allowing you to shape your sound further.

- **Formant Processing:** Activate or deactivate Vocalizer Pro's formant processing by clicking this switch.
- **Freq Spread:** Activate or deactivate the frequency spread by clicking this LED. This feature disperses audio across the frequency spectrum to create more noise, smoothing transitions between notes as harmonics are extracted from the incoming audio.
- **LP Shelf:** Activate or deactivate a low-pass shelving filter by clicking this LED. Activating this feature boosts the incoming signal's higher frequencies for greater clarity.
- **Pitch Shift**: Adjust the formant processor's pitch characteristics with this knob. This feature may be less obvious with instrumental audio sources but is more pronounced with vocal audio.
- **Formant:** Adjust the formant with this knob, which can change the character of the vocal sound it produces.

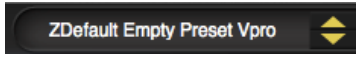
Menu Bar

The menu bar at the top of the window has the following elements:

- **Info:** Click this to show information about audio signal routing in Vocalizer Pro.

- **Settings:** Click this to open the Settings Window. See the ***Settings*** section for more information.

- **Preset Name:** This is the currently loaded Preset. A Preset contains the processors' parameters and Snapshot Pads. Click the up (▲) or down (▼) arrows next to this field to load the next available Preset.



- **Open:** Click this to find a Preset file (**.svx**) or MIDI Learn file (**.sml**) to load.

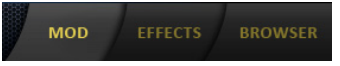
- **Save:** Click this to save a Preset file (**.svx**, containing the current processors' parameters and Snapshot Pads) or a MIDI Learn file (**.sml**, containing the software assignments of your hardware MIDI controller).

Level Meters

The level meters in the window's upper left corner indicate Vocalizer Pro's audio output volume—both left and right channels. Adjust the audio output level with the **Output** slider. Adjust the level of the incoming signal with the **Input** slider.

Tabs

Use the tabs in the window's upper right corner to move between the different pages in Vocalizer Pro:



- **Modulation Tab:** Contains the processors whose envelopes and oscillators shape the sounds produced by Vocalizer Pro. See the ***Modulation Tab*** section for more information.

- **Effects Tab:** Contains the controls for effects that can be applied to the sounds produced by Vocalizer Pro. See the ***Effects Tab*** section for more information.

- **Browser Tab:** Contains the list of Presets that you can load to Vocalizer Pro, each of which contains a saved set of processors' parameters and Snapshot Pads. See the ***Browser Tab*** section for more information.

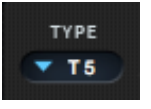
Modulation Tab

Vocalizer Pro has four Spectral Synthesis Modules (**A1**, **A2, B1**, and **B2**), each with multiple envelopes and LFOs (low-frequency oscillators). You can freely adjust the envelopes, LFOs, and other parameters to change the characteristics of the incoming audio signal, whether it's a voice or instrument.

You can also easily adjust the routing between these modules, creating even more combinations of possible sounds.

Spectral Synthesis Types

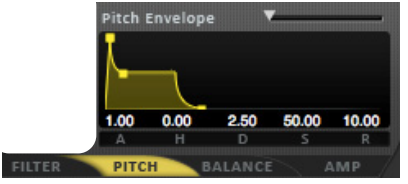
Each module has a Type drop-down menu in its upper left corner. Use these Types to determine the module's overall behavior when processing incoming audio.



- **Normal** Types are indicated by an **N** prefix.
- **Turbo** Types are indicated by a **T** prefix. These Types are more "excitable" and are typically louder than Normal Types.
- The number (**1-8**) next to the letter indicates the amount of harmonic noise added to the signal.
- **Thru** allows audio to pass through the module normally while permitting use of its filter settings.
- **Byp** allows audio to bypass the module entirely.

Like other module parameters, envelopes, etc., these Types are saved within the Preset and Snapshots.

Envelopes



Vocalizer Pro's modules use **AHDSR** envelopes—**Attack**, **Hold**, **Decay**, **Sustain**, and **Release**. When you send a signal through an envelope, it passes through each of these five stages, shaping the sound.

Select which envelope you want to view or adjust by clicking the desired tab under the Envelope Pane: **Filter**, **Pitch**, **Balance**, or **Amp** (**A2** and **B2** only).

Adjust an envelope's shape by clicking and dragging points on the curve shown in the Envelope Pane. The five values shown under the curve are numerical representations of the five envelope stages. You can also manually enter a value for each envelope stage by double-clicking the number.

Adjust how much the envelope influences the sound (envelope depth) by adjusting the slider above it.

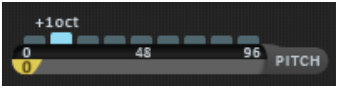
Adjust the characteristics of each envelope with the parameters described in the ***Module Parameters*** section.

Module Parameters

Each module has several adjustable parameters to control Vocalizer Pro's underlying spectral synthesis engine. Used in conjunction with the envelope controls mentioned in the ***Envelopes*** section, these parameters offer you countless ways of shaping your audio.

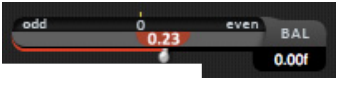
- **Filter:** This drop-down menu determines the type of filter used in the envelope. Set its parameters by adjusting the knobs below it: **Freq** (frequency), **Q** (resonance), and **Sat** (saturation).

- **Pitch:** This slider determines the pitch of the harmonics in relation to the incoming MIDI note(s). The slider ranges from **0** to **96**. This scale of value is affected by the selected **Oct** (octave range) tab above the slider, whose range is from **-1** to **+8** octaves. For example, if the **+2oct** tab is selected, the **Pitch** slider's range represents the pitches across two octaves.



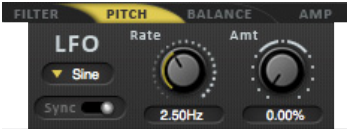
Note: If the **-1oct** tab is selected, then the **Pitch** slider represents *two* octaves, beginning at one octave *below* the fundamental MIDI note entering the engine.

- **Balance:** This slider determines the amount of even and odd harmonics emphasized in or extracted from the incoming audio signal. The further to the right the slider is set, the more even harmonics and even harmonic intensity will occur. The further to the left, the more odd harmonics and harmonic intensity will occur. The closer to the center the slider is, the dryer the sound will be.



- **Amp:** Set the volume of each voice by adjusting the **Vol** slider. Change the tuning by adjusting the **Tune** knob.

LFOs



Each processor has as many LFOs as it has envelopes.

Select which envelope you want to view or adjust by clicking the desired tab under the Envelope Pane: **Filter**, **Pitch**, **Balance**, or **Amp** (**A2** and **B2** only).

Select the LFO wave type by clicking the **LFO** (low-frequency oscillator) drop-down menu. Adjust its rate and amount with the **Rate** and **Amt** (amount) knobs, respectively.

You can synchronize the LFO with the clock of your host software by turning the **Sync** switch on. When **Sync** is on, the **Rate** knob becomes the **Res** (resolution) knob, which determines the LFO's time division relative to your software's clock.

Routing

You can easily change the routing of Vocalizer Pro's four processors by clicking the space between any two adjacent processors.

A **blue arrow** indicates the direction of the signal flow. There is a setting for either direction.

A **red "no connection" symbol** indicates no signal flow between the two processors.

Effects Tab

Vocalizer Pro's Effects Tab contains the parameters for equalization, modulation, and delay/reverb effects, which can be applied to Vocalizer Pro's outgoing audio signal.

Click the LED at the top of each section to activate or deactivate the effect.

Adjust the level of the signal sent into the effects modules with the **FX Volume** slider in the upper left corner. (The slider's numerical value is displayed next to it. You can double-click this value to manually enter a specific value.)

EQ

The EQ section contains various equalization controls in three rows, with each column corresponding to a processor on the Modulation Tab (**A1**, **A2**, **B1**, and **B2**, respectively).

- **Gain:** Boost or reduce the amount of gain of the center frequency set by the **Freq** knob.
- **Q:** Use this knob to increase or reduce the bandwidth around the center frequency set by the **Freq** knob. Higher **Q** settings create a wider bandwidth, so more frequencies around the center frequency will be affected by the EQ. Lower Q settings create a narrower bandwidth around the center frequency.
- **Freq:** Use this knob to set the center frequency to boost or reduce with the **Gain** knob.

Chorus

The Chorus section lets you apply chorus to the sound, creating a shimmery, wavy, or watery effect, depending on your settings.

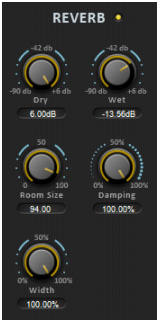
- **Dry:** Adjust the level of the "dry" signal (without chorus applied) with this knob.
- **Wet:** Adjust the level of the "wet" signal (only the signal with chorus applied) with this knob.
- **LFO Depth:** Adjust the depth or intensity of the chorus effect with this knob.
- **LFO Rate:** Adjust the rate of chorus with this knob.
- **Delay:** Adjust the amount of delay of this effect with this knob.
- **Feedback:** Adjust how much of the effect signal is routed back into the effect again.

Delay

The Delay effect produces a stereo echo of the signal.

- **Mix:** Adjust the "dry/wet" mix (the blend between the signal without delay and the delay itself) with this knob.
- **Feedback:** Adjust how much of the effect signal is routed back into the effect again.
- **LPF:** Set the low-pass filter frequency with this knob.
- **HPF:** Set the high-pass filter frequency with this knob.
- **Sync:** You can synchronize the delay effect with the clock of your host software by turning this switch on.
    - When **Sync** is off, you can adjust the rate of the delay in the left and right channels with the **Time** knobs.
    - When **Sync** is on, you can adjust the delay's time division **Beat** knobs. The numbers indicate note values (e.g., **1/2** indicates a half-note), and a "**t**" next to the value indicates it is triplet-based.

Reverb



The reverb effect simulates the nuanced reverberation due to the space of a particular room.

- **Dry:** Adjust the level of the "dry" signal (without reverb applied) with this knob.
- **Wet:** Adjust the level of the "wet" signal (only the signal with reverb applied) with this knob.
- **Room Size:** Adjust the simulated room size with this knob.
- **Damping:** Adjust the absorption of higher frequencies (over the time of reverberation) with this knob.
- **Width:** Adjust the width of the stereo image generated by the reverb.

Browser Tab

The Browser Tab lets you view and load your available Presets and sort them according to their Attributes.

Load a Preset by double-clicking it from the **Filename** list.

Click various Attributes in the **Genre**, **Color**, and **Character** lists to show the Presets with those characteristics.

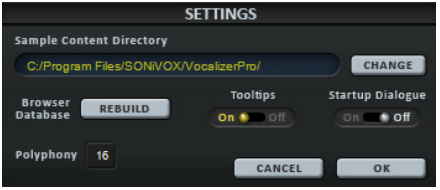
To change a Preset's Attributes:

1. Double-click it to load it.
2. Click the **Attributes** button.
3. Click any Attribute(s) you want to select or deselect.
4. To save these Attributes to the Preset, click the **Save** (disk icon) button.

To clear any unsaved Attribute selections, click the **Refresh** (circular arrow) button.

Settings

Vocalizer Pro's **Settings** Window lets you configure various settings related to the application itself. Click the gear icon in the upper left corner of the main window to open the **Settings** Window.



- **Sample Content Directory:** This is the file path for your audio samples. Click **Change** to set a new file path.
- **Rebuild Browser Database:** Click this button to rescan your presets.
- **Tooltips:** Set this switch to **On** to activate Tooltips, information boxes that appear when you "mouse-over" (hover the cursor over) an element of Vocalizer Pro's interface.
- **Startup Dialogue:** Set this switch to **On** to allow Vocalizer Pro's startup dialogue message to display each time you open it.
- **Polyphony:** Set the number of voices (notes) that can be sounding simultaneously, from **4** to **16**. If Vocalizer Pro triggers a voice beyond this limit, it will sound, but another voice (usually the one triggered first) will be muted to "make room" for the new voice within the polyphonic limit.

Click **OK** to save your changes and close the **Settings** Window, or click **Cancel** to close the **Settings** Window without saving your changes.

Support

For technical support, please contact us through the **Support** page of our website: **sonivoxmi.com/support**.

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Manual Version 1.0