VoiceOne

Voice Pitch and Modeling Tool

LEVELS

MULTI SPECTR

POWER

VOICEONE
VOICE PITCH AND MODELING TOOL

TC·HELICON®
VOCAL TECHNOLOGIES

rel.
INPUT

rel.
OUTPUT

0
3
6
12
18
24
48
IN -dB OUT
METERS

ANALOG
DIGITAL
44.1 48 DI

IN
COR

FLAT
200 100 50 30 20 10 5

MAJOR MIDI
MINOR
♭ OTHER
♭ CUSTOM

PITCH
SHARP
0 5 10 20 30 40 50 100 200
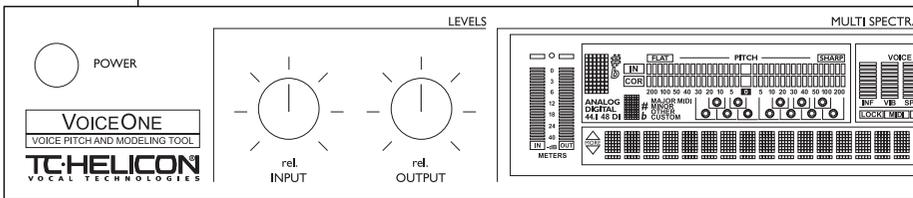
VOICE

INF VIB SP

LOCK MIDI

Quick Start Guide

BEFORE YOU BEGIN

Thank you for purchasing the TC-Helicon VoiceOne Vocal Pitch and Modeling Tool. We know you want to get started right away. By reading this Quick Start manual you will be up and running in a matter of minutes. Please use this to get into the main functions of VoiceOne, but do refer to the main manual for more detailed features and descriptions.

The TC-Helicon Team
www.tc-helicon.com

BEFORE YOU BEGIN

1) Check the contents of your VoiceOne carton. You should have received:
> * VoiceOne unit
> * Power cable appropriate to the power receptacles for you region
> * VoiceOne User Manual
> * This VoiceOne Quickstart Manual
> * VoiceOne Preset, Style and Application Pamphlet
> * TC-Electronic Catalog
> * Warranty Card

2) Observe basic safety precautions:
> * Operate from a regulated power receptacle.
> * Do not open the unit! There are no user serviceable parts inside.
> * Turn amplifiers and speakers down or off when patching in this equipment.

WHAT DOES VOICEONE DO?

VoiceOne is a special product for the human voice. With this tool you now have the power to do:

- Voice Modeling (TM) Effects -
  - Inflection including FlexTime(TM)
  - Vibrato
  - Resonance (Warp)
  - Growl
  - Breath
  - Spectral (Voice Optimized Equalizer)
- Pitch Shifting and Correction to +/- 2 octaves, by reference to scales, note mapping, fine tuned cent unit shifts, MIDI notes and Pitch Bend
- PureShift(TM) Full DSP Mode for Pitch Effects.
- Foot switch control of select parameters.
- Extensive MIDI control of effect parameters.

Let's get started!

SETUP - AUDIO AND MIDI

SETTING UP VOICEONE

Note: Do not turn the unit on until you make all of your setup connections.

1) **Connect the power cable** to the back of VoiceOne and plug it in to the power receptacle.
2) **Connect your audio source - a)** Connect the output from your mixer, preamp or other balanced equipment to VoiceOne, using XLR analog cable to Channel 1, or **b)** an S/PDIF digital cable to the DI jack. See the main manual for Digital I/O information. VoiceOne defaults to analog settings.
3) **Connect your Audio Output - a)** Connect the Balanced Analog Output from Channel 1 to your mixer, recorder or monitor system using balanced XLR cable. **b)** You may also connect the S/PDIF Out 'DO' to your S/PDIF digital equipment.
4) **Connect your MIDI devices - a)** Connect the MIDI Out from your controller or sequencer to the MIDI In in VoiceOne. **b)** Connect the MIDI Thru to your other MIDI devices if you choose. **c)** Connect the MIDI Out to your MIDI recorder or sound module.
5) **Footswitch -** You may connect a footswitch to control the bypass features. See the main manual for details.
6) **Set the Input and Output Knobs** to full counter-clockwise as a precaution for power-up.
7) **Power up VoiceOne** using the POWER key.
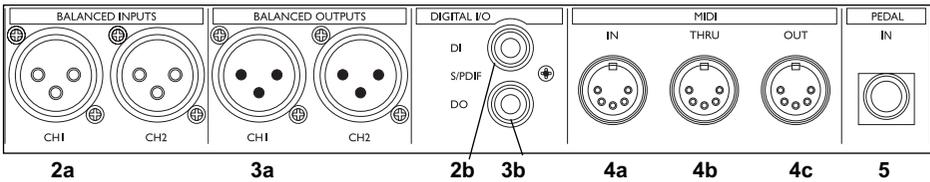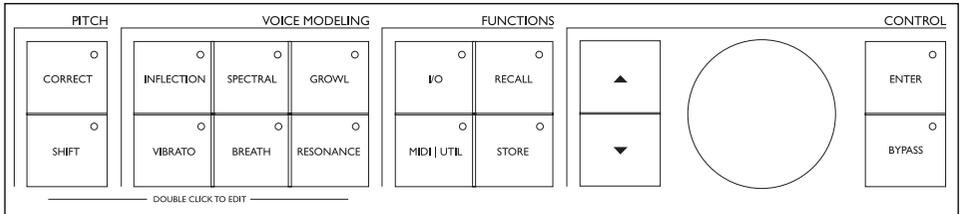

Front Panel Diagram - Left
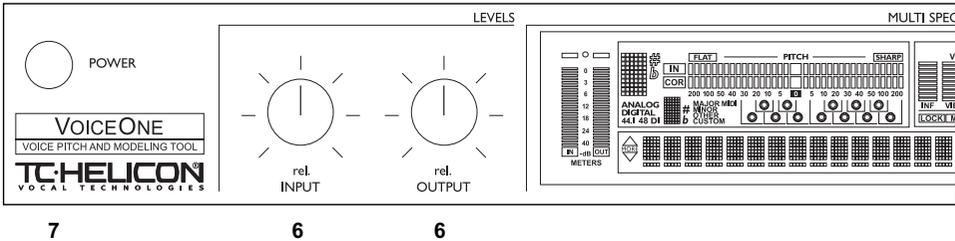
You're now connected and powered up! You can now set the input gain of your signal to a strong level without clipping (The leftmost meter labelled IN will light up red if there is an overload). Use the Input knob to adjust this.

Now let's take a look at the front panel controls...

Rear Panel Diagram

FRONT PANEL CONTROLS

FRONT PANEL NAVIGATION

PITCH and VOICE MODELING KEYS
A single click will activate/deactivate the effect. Double clicking on the key will enter the edit menu of the effect algorithm. A lit key LED indicates that the effect block is active.

FUNCTION KEYS: I/O and MIDI/UTIL
A single click will enter the parameters for editing.

RECALL KEY
Use the DATA wheel to scroll through the presets, then pres RECALL to load the preset.

STORE
Press STORE once to save a preset. Select a location using the DATA wheel. Press ENTER to confirm this operation. To edit the name, use the ARROW keys to scroll through the letter positions, and the DATA wheel to select a character. Press ENTER or STORE to finish.

DATA WHEEL

ARROW KEYS

ENTER KEY

BYPASS KEY
Bypasses all functions, allowing the original input audio to pass.

Now that you know how the buttons are set up, you can experiment with browsing the presets. Use the DATA wheel to do this. Press the Voice Modeling and Pitch keys to toggle the effects on and off. Turn the wheel to preset 99. This is the preset we will use to explore the individual effects.

Let's look at the effects and what they do...

VOICEMODELING EDIT PARAMETERS

VOICE MODELING (VM) STYLES AND AMOUNTS

Here's a good way to get started hearing all of the Voice Modeling effects with your vocal.

- Go to factory preset 99 - we'll use this preset to do our experiments.
- Press the VM effect key so that it lights - the effect is now active. Choose between Inflection, Vibrato, Spectra, Breath, Growl and Resonance.
- Double click that same key to enter the edit parameters.
- Set the Amount to 50% - a midrange value.
- Use the ARROW DOWN key to scroll to the next parameter - the styles. Styles are like miniature factory presets for the VM categories. Refer to the Preset, Style and Application pamphlet for descriptions on the effects applications, and the style functions.

INFLECTION EFFECTS

The inflection effect can alter the inflection of your vocals in different ways. You can add various types of "scooping" effects to the onsets of a lead vocal for instance, but inflection is also the place where you can find the humanization tools that will help you give a harmony line its own identity or create extremely natural doubling effect. Inflection provides tools such as portamento, pitch and timing randomization (using our FlexTime(TM) algorithm) as well as up/down scoop models.

VIBRATO KEY EFFECTS

Vibrato is a pitch and amplitude effect that singers often use in their delivery of a piece of music. It is a combination of various characteristics of the voice being repeatedly altered in a oscillating fashion. Every singer's vibrato is unique. The Vibrato Styles are based on real vocalist's vibratos. We have analyzed a large set of parameters from a voice database and created various vibrato models. The Vibrato setting names reflect the style of the vocals from which they were extracted. Experimentation is the key to finding a style setting that best suits your application. You might begin incorporating Vibrato into your sound by setting the **VIB Amt** control to 50%. This setting matches the depth level that we analyzed in our modeling subjects. You can

then vary the effect from this middle range up or down to suit your taste.

SPECTRAL KEY EFFECTS

The Spectral styles reflect the natural equalization equivalent to the native control a singer has over his or her own voice, and apply this equalization to the VM voice. These styles may be used in conjunction with the resonances, or purely as additional tonal control over the VM voice.

BREATH KEY EFFECTS

The Breath styles add breathiness to the vocal. This varies from a whisper, all the way to a rough, raspy sound, such as is found in hard rock and 'alternative' rock music.
Some styles are sensitive to the dynamics of the incoming vocal, meaning that they can be 'played' by varying the level of what is sung into Voice One. This is also known as 'self control'.

GROWL KEY EFFECTS

Growl in VoiceModeling mimics friction activity between the larynx and epiglottis regions of the vocal tract. This is a 'character' phenomenon used in high energy rock, blues or old soul music for example.
The Growl effect also models the changes in the vocal tract shape that growling requires, altering the vocal resonance characteristics. Some styles are sensitive to the dynamics of the incoming vocal, meaning that the effect can be controlled by the volume of what is sung into Voice One. This is also know as self-control.

RESONANCE KEY EFFECTS

Resonance styles allow you to take the harmonic content that forms the identity of the incoming voice and change the content's positioning to yield a new character to the sound. Some styles change the voice to a heavier, darker chest resonance, while others lighten the sound to more of a head and throat resonance. Some styles also change the voice in a more complex way that depends on the input voice.

PITCH EFFECTS EDIT PARAMETERS

PITCH CORRECTION

Again, we will use Factory preset #99 for our experiments. Turn all of the VM effects off for now by pressing their keys on the front panel. Press the CORRECT key in preset #99 to turn on the effect. We have set this up to correct to a chromatic scale, with a default root of C. Double Click the CORRECT key and use the ARROW keys to find the COR Window or correction window. Sing or play a vocal into VoiceOne, and adjust this window with the DATA wheel. You should also work with the COR Attack and COR Amount parameters to change the strictness and amount of correction. Refer to the main User's Manual to investigate the other correction scales, entering a custom scale, and correction via MIDI control.

PITCH SHIFTING

Shift Amount/Mode

To understand how the shift amount is applied in the various modes, it is a good idea to be familiar with how VoiceOne shows the shift offsets in the various modes. Please refer to the main manual for details.

In our Quickstart test preset (Factory #99) the setting is for **SHI Mode *Chromatic***. You can then apply a static shift to the vocal by changing the SHI Amount. This value is in cents. 100 cents = one semitone. Experiment with upshifts and downshifts. When finished, Press the SHIFT key to return to the top level screen. Press the CORRECT button to disable the Pitch Correction.

Now, let's do an intelligent shift. We're going to use a major scale as our basis.
Remember, to hear the effect, the SHIFT key must be pressed so that the LED lights. Double-click the SHIFT key, and use the ARROW keys to find the SHI Mode parameter. Select *Major 1* with the DATA wheel. With the Arrow keys, scroll to the SHI Amount parameter, and select the interval you want to shift to. Try *'3rd'* as an experiment. The scale is in C major, since you haven't changed the root note in the Correction section. You should now hear your input shifted to a diatonic 3rd above C, depending on the notes you send in. If you sing C, you should hear E.

There you have a basic hands on demonstration on how some of the many functions of VoiceOne are accessed. We invite you to explore these features in depth in the main User's Manual.

Have fun with VoiceOne!

Visit our website for technical support, literature, information, presets, FAQs, promotions and many other items related to TC-Helicon Vocal Products.

www.tc-helicon.com

Thank You
The TC-Helicon Team