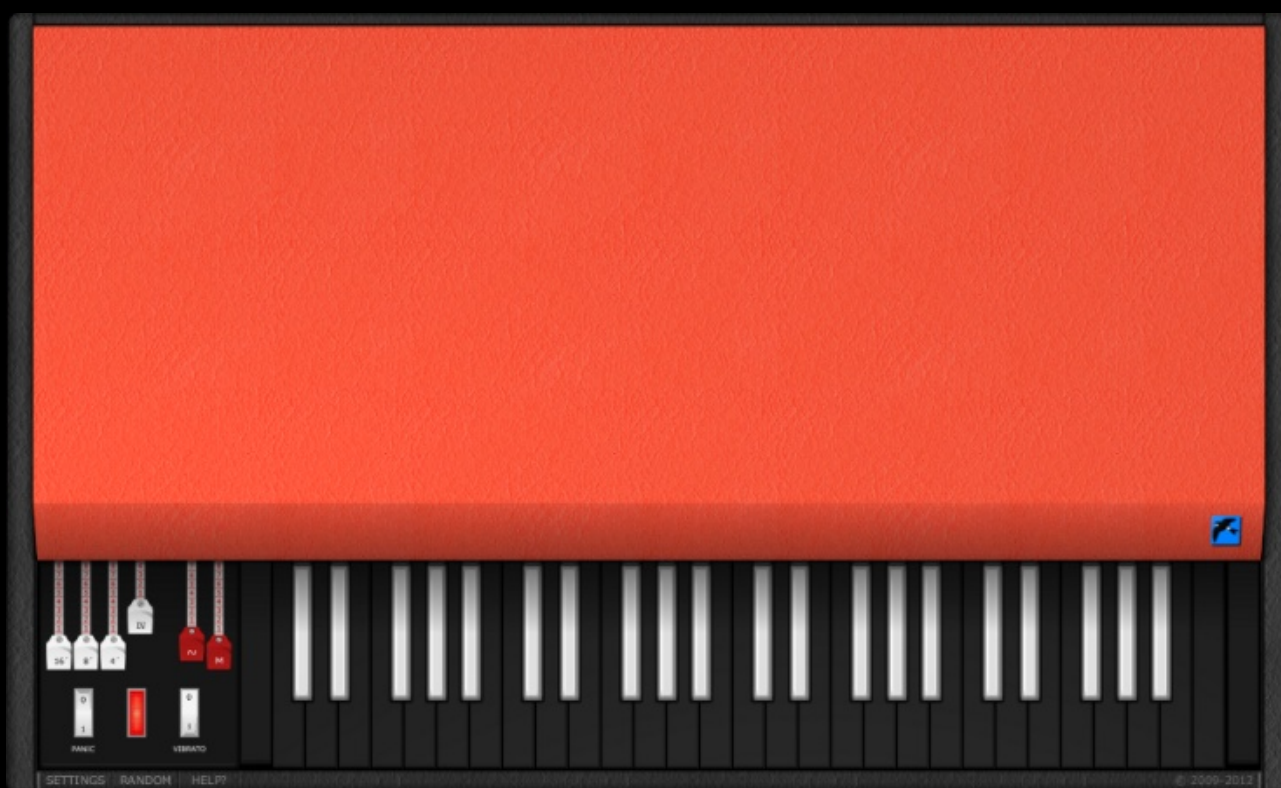


COMBO MODEL V



OWNER'S MANUAL

VERSION 1.1.2

1. INTRODUCTION

Combo Model V is a virtual combo organ, modelled after the mother of all combo organs: the Vox® Continental.

Vox® is a registered trademark of Korg Europe Limited. Note that Korg does not endorse Combo Model V, nor is Korg in any way associated or affiliated with Martinic.

1.1. Features

- 4-octave C-to-C keyboard
- Harmonic range 7 polyphonic octaves
- 4 footage drawbars: 16', 8', 4', mixture
- 2 voice drawbars: Flute, Reed
- Monophonic bass voice
- Vibrato unit with adjustable speed and depth
- Swell (volume) pedal
- Adjustable tuning per note
- Fully modelled (no samples inside)
- Model includes oscillators, dividers, crosstalk, noise, filters, key contacts and key click
- Velocity-sensitive key contact attack and release
- Fully automatable
- 32 original Connie presets included

1.2. System Requirements

Combo Model V is available as a VST* 2.4 or an Audio Units (AU) instrument, which means it needs to run inside VST or AU hosting software. Combo Model V has been tested in the following hosting software:

- Ableton Live 8
- ACID Pro 7
- AU Lab
- AudioMulch 2.0
- Cantabile
- Cubase 6.5
- Digital Performer 7
- DSP-Quattro 4
- energyXT 2.5

* VST is a trademark of Steinberg Media Technologies GmbH.

- FL Studio 10
- GarageBand '11
- KORE 2
- Logic 9
- MAGIX Music Maker
- Metro 6
- MiniHost
- Mixcraft 6
- MU.LAB 3
- Orion 7.6
- Pro Tools 8 (*via FXpansion's VST to RTAS Adapter*)
- REAPER 4
- Renoise 2.5
- SONAR 8
- Studio One 2
- Tracktion 3
- V-Machine
- VSTHost/SAVIHost

If your hosting software is not on the list, then don't worry. There is a big chance it will work anyway, because (in theory) Combo Model V should work in *any* VSTi/AUi-capable host.

Combo Model V runs on Windows XP (SP1 or newer), Windows Vista, Windows 7, or Mac OS X 10.4 (Tiger), 10.5 (Leopard), 10.6 (Snow Leopard), or 10.7 (Lion). Combo Model V does not have any other special requirements regarding your computer; if your VST hosting software runs on it, then Combo Model V will too. Although not required, a MIDI keyboard will come in handy.


Also not a requirement *per se*, but you will probably want to add an amplifier/cab simulator to your effects chain, right after Combo Model V. Any guitar amp simulator that gives you a more or less clean sound should do.

2. BASIC CONTROLS

After loading Combo Model V (ComboV) in your hosting software you will see the settings window containing various drawbars, switches and sliders, and the 4-octave keyboard below it. In the settings window you can adjust the drawbar settings, turn vibrato on or off, or play the keyboard, all using the mouse. You can also tweak various other settings that are “under the lid”.

2.1. Footage Drawbars

The 4 drawbars with the white tips are the footage (or pitch) drawbars. Combo Model V uses additive synthesis, and using the footage drawbars you adjust the harmonics mix. You can think of it as an equalizer, where the **16'** drawbar controls the low frequencies, **8'** and **4'** the middle frequencies, and the **IV** (or mixture) drawbar the high frequencies.

You can adjust a drawbar setting using the mouse by dragging the drawbar tip up or down, or you can left-click on the tiny numbers that are printed on the drawbar, or you can use the scroll wheel. You can also right-click (or -click on Mac OS X) on a drawbar to enter a value using the computer keyboard. To reset a drawbar to its default value, double-click on it.

2.2. Voice Drawbars

The 2 drawbars with the red tips are the voice (or tone) drawbars. The drawbar labelled **~** controls the foundation voice, which produces a flute-like sound. The **M** drawbar controls the reed voice, which has a much brighter sound to it.

2.3. Random Registrations

All the way down in the bottom left corner you will find three small buttons. The button in the middle is labelled **Random**, and when you left-click on it, all 6 drawbars will be set to random values. Combo Model V can produce no less than 377,364 different sounds, so this button should keep you off the streets for quite a while.


2.4. Vibrato

Below the drawbars you will find two white rocker switches (with a red pilot light in between them). The rocker switch on the right is labelled **Vibrato**, and by left-clicking on it you toggle the vibrato effect on or off.

2.5. Help

Of the three small buttons in the bottom left corner the one on the right is labelled **Help?**. You can open this Owner's Manual from within the Combo Model V by left-clicking on this button.

2.6. About

All the way on the right, about two-thirds down, you will find the Martinic logo (). When you left-click on it the about box is displayed, which will tell you the exact version of Combo Model V that you are running.



The settings window with the various drawbars, switches and sliders

3. TUNING AND SETTINGS


The left button of the three small buttons in the bottom left corner is labelled **Settings**, and when you left-click it the settings window is opened (or closed). An alternative way of opening the settings window is to double-click anywhere on the orange/red top.

To close the settings window, left-click on the small button labelled **Close** in the upper right corner of the window. However, you don't *have* to close the settings window; by leaving it open you will have access to the settings at all times. If you save your project containing Combo Model V with the settings window open, the next time you load the project the settings window will still be open.

In the left part of the settings window you will find six drawbars and two rocker switches. You will find smaller versions of the same controls in the bottom left corner. Both sets of controls offer exactly the same functionality (see chapter 2. *Basic Controls*). The only difference is that here you can actually *read* the numbers printed on the drawbars.

3.1. Tuning

In the settings window you can adjust the tuning independently for each of the 12 notes in an octave. The tuning for the same note in different octaves is always the same, so when you detune the F# by -1.2 cents, all F# notes in all octaves will be detuned -1.2 cents.

You can adjust tuning values using the mouse by dragging the slider handle left or right, or you can left-click anywhere on the slider to move the handle directly to that position, or you can use the scroll wheel. For higher precision, hold down the Ctrl key while moving the slider. You can also right-click (or -click on Mac OS X) on a slider to enter a value using the computer keyboard. To reset a slider to its default value, double-click on it.

You can change all 12 tuning sliders at once by holding down the Shift key while clicking on any one of the tuning sliders. You can semi-randomly detune the organ by holding down the Alt key while clicking on any one of the tuning sliders.

By default Combo Model V is equally tuned to A = 440 Hz.

3.2. Tuning Lock

Above the tuning sliders you will find a toggle switch labelled **Lock**. If you lock the tuning, then it will persist when you select another preset, or when you load a preset or a preset bank. However, you can still change the tuning by hand, or using automation.

3.3. Quality Control

For optimal quality Combo Model V's internals need to be recalculated when you change the tuning. Because recalculating the internals uses a lot of CPU resources, may want to disable quality control in some situations (e.g. when you are automating the tuning using a LFO).

You can toggle quality control on or off by left-clicking on the miniature toggle switch labelled **QC Bypass**. You will find this toggle switch a little to the right above the tuning sliders.

While ComboV's internals are being recalculated the quality control LED will momentarily turn on, unless you bypass quality control, in which case the LED will stay on.

If your VST hosting software has an option to inform plug-ins of offline rendering, then enable this option. This will ensure optimal quality during offline rendering.

3.4. Vibrato Speed and Depth

You can adjust the vibrato speed and depth, just like you can on a real-world Connie. However, in the real world you would have to open her up first, so you wouldn't be able to easily adjust the speed and depth while playing. Combo Model V has no such limitations, so you can adjust these settings all you like; you can even automate them.

3.5. Volume

The volume adjust and swell control together determine the output level of Combo Model V. By default the swell control is linked to your MIDI expression pedal (CC #11, see chapter 4.2.

Default MIDI Map), so it can be used to add dynamics to your performance. The volume adjust can be used to change the overall volume.

3.6. Auto Adjust

The flute voice is rather soft when compared to the reed voice. If you enable the auto adjust toggle switch (above the volume and swell sliders), then the volume is automatically raised as you turn down the reed voice, so the overall volume stays the same.

3.7. Noise Gate

Combo Model V has an internal noise gate, that automatically kicks in when no keys are playing. You can turn off the noise gate using the noise gate toggle switch above the volume and swell sliders.

3.8. Key Contacts

A real-world Connie has 4 contacts for each key. When you depress a key these contacts will not sound all at once, but they will rather sound one after another, especially when you depress the key very slowly. To mimic this behaviour Combo Model V uses the velocity from your MIDI keyboard to control how fast the individual key contacts will sound.

You may want to adjust the attack and release settings to match the velocity curve of your MIDI keyboard.

3.9. Bass Voice

The original Continental had only a 4-octave keyboard. A lot of MIDI controller keyboards will feature 5 octaves or even more, so that leaves at least one octave unused. When you change the bass/chords rotary switch from the left (off) to the middle position, you can use the extra octave below the original 4 octaves to play bass. Alternatively you can turn the bass/chords switch all the way to the right, in which case the bass voice is added to the bottom octave of the regular voices. The slider lets you adjust the volume of the bass voice.

You can preview the bass voice by playing notes in the bottom octave of the on-screen keyboard while holding down the Alt key.

Note that the bass is monophonic with low-note priority.

3.10. MIDI Channel

By default Combo Model V receives MIDI data on all 16 channels, but you can also select one particular channel.

3.11. MIDI Learn

By default Combo Model V's most-used controls are mapped to a standard set of MIDI Control Change (CC) numbers (see chapter 4.2. *Default MIDI Map*). However, the sliders of your MIDI keyboard may well send out other CCs.

Here is how you can learn Combo Model V to respond to the sliders, knobs and buttons of your MIDI keyboard:

1. Set the slider, knob or button on your MIDI keyboard to zero or "off".
2. Left-click on the small button labelled **MIDI Learn** in the bottom left corner of the settings window. The status LED on the button will now light up, indicating that Combo Model V is in learning mode.
3. Left-click on a Combo Model V control, e.g. the 16' drawbar. Note that MIDI learn is available only for the drawbars, and for the vibrato and volume controls.
4. Move the slider, knob or button on your MIDI keyboard to the "on" position. Alternatively you can click on the tiny button a little to the right labelled **C** ("clear") to clear the mapping for the selected control.



MIDI learning the 16' drawbar

When the MIDI learn status LED is no longer lit up you are ready. You will have to repeat these steps for each control you want Combo Model V to learn.

Note that for the drawbars Combo Model V not only learns the CC number, but also the direction in which the slider or knob moves. This comes in handy if your MIDI keyboard has mixer-style sliders, which usually operate "upside down" when compared to drawbar-style sliders.

You can also learn Combo Model V to use the pitch wheel to temporarily "bend" one of ComboV's controls up or down. When the pitch wheel is in its neutral (center) position, you can adjust the value of the linked control using the mouse. The adjusted value will then become the new center value for the pitch wheel. When you link the pitch wheel to a drawbar, then all drawbars in the same group (white or red) will be linked to the pitch wheel. Note that you can link both a CC and the pitch wheel to the same control.

Next to the MIDI learn button you will find two small buttons labelled **Sus** ("sustain") and **PB** ("pitch bend"), which toggle sustain pedal (CC #10) and pitch bend support on/off. Note that if you link the pitch wheel to a control, you can no longer use the pitch wheel for pitch bend, and *vice versa*. The same goes for the sustain pedal and CC #10.

When you save your project containing Combo Model V, the learned MIDI map will be saved along with the other settings. However, if you load a new instance of Combo Model V, the default MIDI map will be loaded again. By clicking on the tiny button labelled **S** ("save") you can save your customized MIDI map as the new default. That way the next time you add Combo Model V to a project, it will automatically load with your customized MIDI map.

If you need to revert to the default MIDI map while you are in the middle of a project or session, then click on the tiny button labelled **L** ("load"), and your MIDI map will be loaded without affecting any other settings. If you hold down the Alt key while clicking on the load button, the original default MIDI map will be loaded.

If you somehow don't want Combo Model V to have any MIDI mappings at all, then make sure the MIDI learn button is *not* active (i.e. the status LED is off), and click on the tiny button labelled **C** ("clear").

4. MIDI IMPLEMENTATION

Combo Model V can receive MIDI data on all 16 channels, or on one specific channel (see chapter 3.10. *MIDI Channel*).

Combo Model V will respond to Note On/Off messages within the C2..C7 range. It supports both Note On and Off velocity. However, velocity is not used to vary the volume of the played notes, as is the case with most (software) synthesizers. Instead it is used to mimic the key contacts of a real-world Connie (see chapter 3.8. *Key Contacts*).

Combo Model V supports Control Change (CC) values in both 7-bit (standard) and 14-bit (MSB/LSB) resolution, depending on the control the CC is mapped to. Combo Model V optionally supports the sustain pedal (CC #64) to sustain notes, provided that CC #64 is not mapped to another control (see chapter 3.11. *MIDI Learn*).

Combo Model V supports Pitch Wheel messages, which can be used to bend the pitch up to 2 semitones down (note that bending the pitch up is not supported). Alternatively the pitch wheel can be linked to one of ComboV's controls (see chapter 3.11. *MIDI Learn*).

Combo Model V supports Program Change messages for selecting one of the 32 presets (see chapter 5. *Presets*).

4.1. Panic

Below the drawbars you will find 2 white rocker switches (with a red pilot light in between them). The rocker switch on the left is labelled **Panic**, and when you left-click on it all notes will immediately stop playing.

When Combo Model V receives an All Notes Off message, it will also immediately mute all notes.

4.2. Default MIDI Map

CC	Control
1	Vibrato on/off
11	Swell pedal [MSB]
12	16' drawbar
13	8' drawbar
14	4' drawbar
15	IV drawbar
16	Flute (~) drawbar
17	Reed (M) drawbar
43	Swell pedal [LSB]
73	Vibrato speed
74	Vibrato depth
-	Volume adjust [MSB]
-	Volume adjust [LSB]

Note that Combo Model V is basically B4/EVB3 compatible, so if your MIDI keyboard has a setting for B4 or EVB3, that setting should also work for Combo Model V. If your MIDI keyboard has no such setting, then don't worry; you can learn your MIDI keyboard and Combo Model V to get along with each other (see chapter 3.11. *MIDI Learn*).

5. PRESETS

Combo Model V comes with 32 default presets, based on the list of suggested tone combinations from the original Connie manual.

Presets for your favourite Connie songs are *not* included, so you will have to figure out these all by yourself. But that shouldn't be too hard; after all, there are only a mere 377,364 combinations.

Combo Model V

Version 1.1.2

©  MARTINIC 2009-2012

www.martinic.com/combov

This software is freeware. You can use this software without any restrictions in all your commercial and non-commercial projects. You can freely redistribute this software, provided that a) you do not charge anything for this software, and b) you redistribute the original, unaltered installer or ZIP archive.

This software is provided "as is", without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.