



## VB3-II – Virtual tonewheel organ USER'S MANUAL

Version 1.1.1

[www.GenuineSoundware.com](http://www.GenuineSoundware.com)

### VB3-II Virtual Tonewheel Organ



As of its date of release in 2018, GSi VB3-II is the result of almost 15 years of study, research, experimentation and development of the simulation of a vintage Hammond B3 organ. It is the evolution of the GSi VB3 1.x with a new sound, a new parameter set, endless possibilities of sound customization. It's not a simple update to an old software, it's a whole new product. It's based on the same sound engine that was written first for the Hamichord Organ, then for the Crumar Mojo, and is also found in the Crumar Mojo61 and in the GSi Gemini. The DSP part of VB3-II was rewritten from the ground up around 2010 and has been constantly updated during all these years by adding features and improvements suggested by many users of our hardware products. Many people requested this sound engine to be released as a software for regular computers, and here it is. Now you can have the sound of a full-featured clonewheel organ right into your computer.

#### Main features:

- Full polyphony (61 upper + 61 lower + 25 pedals = 147 notes)
- 91 modeled tonewheels with accurate phase synchronization
- Adjustable leakage noise and cross modulation between tonewheels
- A total of 22 different tonewheel generators to choose from
- Generator shaping for a total of 154 generator combinations
- Adjustable global tuning from 430 to 450 Hz
- Foldback on 16" deactivatable
- Complex wheels
- Resistor wiring with multiple options
- Realistic "run" motor wow & flutter
- Busbars and 9 key contact simulation
- Two separate sets of drawbars per manual
- Full "inverted octave" presets
- String Bass with adjustable release time
- Loudness "robbing" effect
- Single triggered percussion with natural capacitor discharge/recharge
- Adjustable Percussion Level & Decay
- Vibrato/Chorus virtual scanner
- Adjustable Vibrato Scanner depth & mix
- Separated Upper and Lower V/C tablets with smooth switching
- Dynamic tube overdrive simulation
- Spring Reverb (pre) and Digital stereo reverb (post)
- Rotary speaker simulation with virtual microphone positioning, tube overdrive, tube feedback
- Rotors "Front Stop" brake position with adjustable preferred position
- Very low CPU consumption
- Advanced MIDI Learn function with import/export of custom mappings
- Upper and Lower manuals SPLIT with adjustable split point
- Adjustable output level
- Supports pedal sustain
- Custom programmer with import/export of Programs and Banks
- ...and many more.

## INSTALLATION

### SYSTEM REQUIREMENTS

VB3-II is available in the following formats:

- for Windows: VST2 x64, VST3 x64, Standalone x64
- for OSX: VST2 x64, VST3 x64, Audio Unit x64, Standalone x64

Windows:

- any Windows computer manufactured after 2010 running Windows 7 x64 or greater
- ASIO compatible sound card for low latency performance

OSX:

- OSX version 10.9 or greater

Of course you need a MIDI controller keyboard to play VB3-II, and if you want to enjoy the experience of a real dual manual console organ, we advice you to check out GSi DMC-122:



Please visit [www.GenuineSoundware.com](http://www.GenuineSoundware.com) for more informations.

### INSTALLATION ON WINDOWS

An automatic installer is provided. Double click its icon, accept the EULA and follow the on-screen instructions.

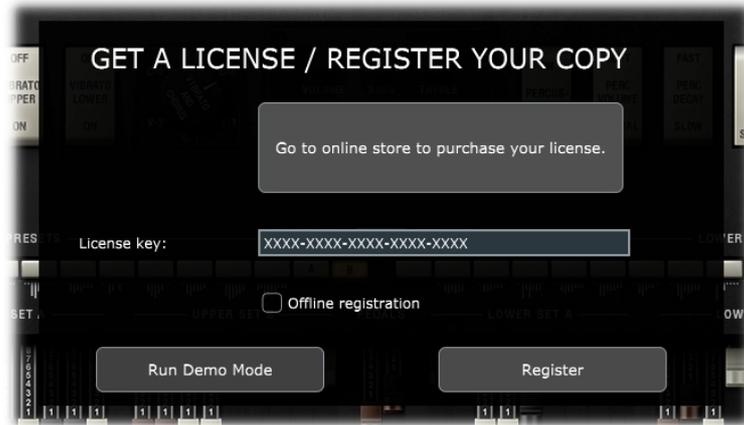
### INSTALLATION ON OSX

An automatic installer is provided. Double click its icon, accept the EULA and follow the on-screen instructions. At some point you might be asked to insert your user's log-on password, this is required by OSX to authorize the copy of the files into your Library.

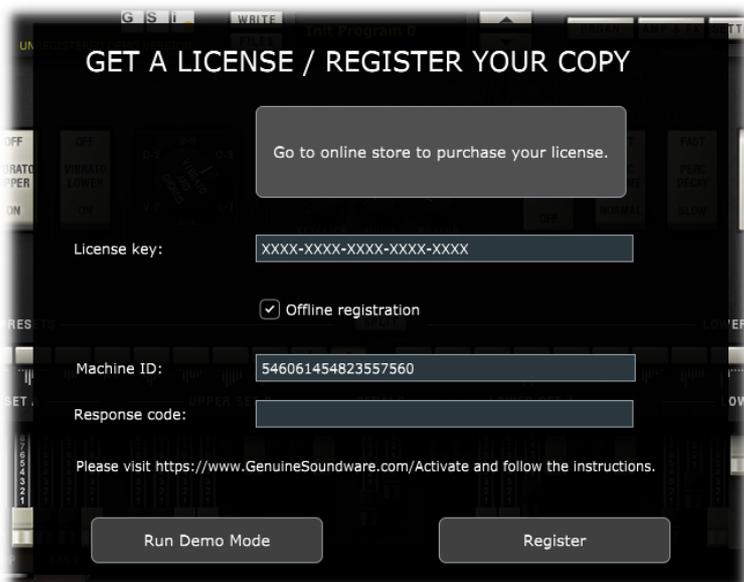
## AUTHORIZING YOUR LICENSE

When the product is installed, it runs in DEMO mode so that you can test its sound and functionality, but with some minor limitations: the sound will go silent for a second every 15 seconds, and importing / exporting Programs and Banks won't be allowed.

If you have purchased a license, you can authorize your copy by doing copy & paste of the 24 characters license code into the registration screen.



If the computer is connected to the Internet, just insert the license code and click REGISTER, the rest of the process is fully automatic. In case you wish to install VB3-II on a computer that isn't connected to the Internet, click the "Offline registration" option after inserting the license code, you'll be presented a numerical code in a read-only text box, copy that code somewhere (on paper or in a text file that you'll later save onto a USB stick), then go at a computer connected to the Internet, point your browser to <http://www.genuinesoundware.com/activate> and follow the instructions. The basic personal license allows three installations; extra installations can be purchased separately. Please contact GSi for this.



## THE MAIN WINDOW

Since you're using VB3-II can we assume that you already know what the fabulous B3 organ was, how it was done and how it is used? You should be well aware of what drawbars are, what the percussion circuit does to the sound and how the "scanner vibrato" impacts on the overall sound, not counting the Leslie rotating amp.

Well, what you see on the main screen of VB3-II is pretty much what you see when you sit at a real B3, with every little bit exactly where it belongs. In the center of the screen you have six knobs for the basic adjustments such as Volume, Bass & Treble EQ, amount of KeyClick, amount of Overdrive and amount of Reverb.

On the left you have the controls to select and activate the scanner vibrato effect, on the right you have the four percussion tabs; on the bottom there are all the drawbars (how many!) and the classic "half-moon" switch to select the rotary speaker speeds. Now let's just examine the rest.

## DRAWBAR PRESETS

Right above the drawbars there are two rows of 12 buttons each with some symbols below them. These represent what on a real B3 is the octave with inverted colors that is used to recall the "presets".



Since VB3-II is a software, the concept of "preset" can assume a different meaning. VB3-II is capable of storing up to 128 "Programs" in a "Bank", each Program stores all parameters, including the drawbar positions, so there would have been no need to implement the old-style drawbar presets, but this is an added feature that VB3 has always had since its first release. Drawbar presets just store the drawbar registrations and nothing else. The first button is the "Cancel", i.e. a zeroed preset (no sound on that manual) and the buttons labeled A or B switch between the drawbar sets A or B. Remember that, for what concerns the upper manual, the percussion is only available on the SET B and the 9<sup>th</sup> drawbar (1') will be muted if the percussion is on.

Storing an organ preset is as easy as right-clicking on the desired preset and doing what the menu asks for. Once the preset is stored, its content is graphically represented below it by gray vertical lines.



## SPLIT

If you don't have two keyboards but still want to play left hand walking bass on the lower manual and comping or melody on the upper manual, the SPLIT function comes handy. Click on the button to enable / disable this function, right click to select the split point. Both these parameters (split toggle and point) are stored with Programs. The split is only done between the upper manual (on the right) and the lower manual (on the left), but if you also wish to play the pedal tones on the left part of the keyboard, open the Edit Organ window (explained later) and activate the "Pedals to lower" parameter. Now the Pedal tones will play along with the lower manual tones on the left of the keyboard. The lower manual will still respond to its associated MIDI channel.



## ON SCREEN KEYBOARDS

On the bottom right corner of the interface you see a small button, click on it to show or hide the virtual keyboards that will allow you to play VB3-II from your screen by clicking with the mouse on the keys, or by using your computer keyboard; the most useful function of virtual keyboards, though, is to visualize what's being played from the MIDI keyboard. This comes very handy if you're planning to use VB3-II to teach the Hammond technique to your students or if you just want to show what you're playing on a big screen at a fair or in a video.



Virtual keyboards are always hidden by default.

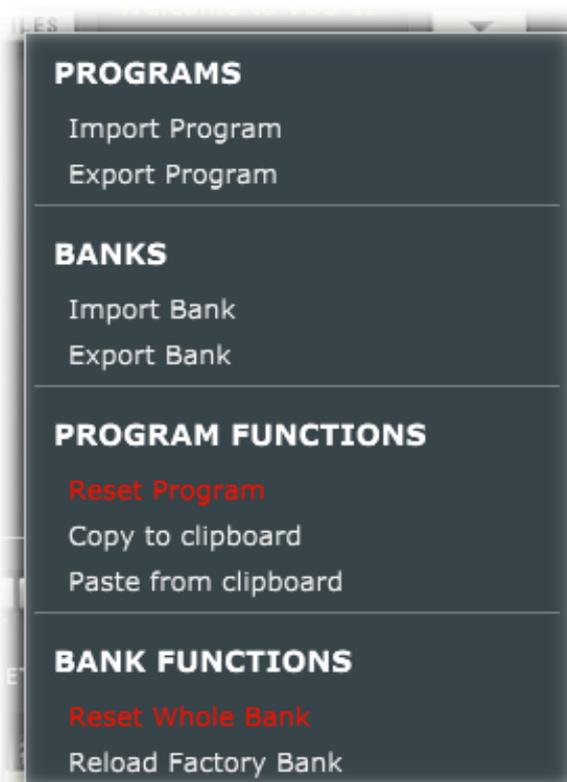
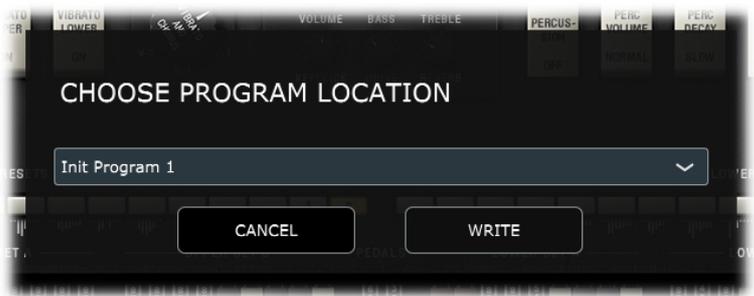
## THE PROGRAMMER

One of the most interesting features of VB3-II is the programmer. This section allows to Write / Recall user Programs, import / export single Programs or entire Banks, also copy & paste Programs from one location to another, or initialize the current Program for a fresh start.



Each Bank consists of 128 Programs numbered from 0 to 127, like the good old MIDI protocol required. To recall a Program, either use the UP / DOWN arrows on the left of the main display, or click on the Program name label for a full pop-up list of the 128 available Programs, or recall them from MIDI Program Change events (needs to be activated from the Settings Window).

To store a Program: once you're done with all your tweakings and you decide it's time to store the Program, just click the WRITE button if you wish to overwrite the current Program; if you want to give it a new name, right-click the name label and type the new name, press <ENTER> to confirm. In case you wish to store it to a new location, right-click the WRITE button, a dialog window pops up asking you to select a location from a drop-down menu.



Other operations with Programs and Banks can be performed from the FILES menu that you can access by clicking on the FILES button. Here you can export or import single Programs or entire Banks. Programs and Banks use a proprietary format and are saved in binary files with the extensions .VB3Program and .VB3Bank, and the built-in bank is automatically saved every time a Program is written or the application / plugin is closed. The functions "Copy to clipboard" and "Paste from clipboard" can be used for reorganizing Programs in a Bank, and "Reset Program" recalls an initialized program with default parameter settings. Operations such as import, reset or paste, that apparently overwrite the current program, actually use a temporary volatile memory that is lost unless the WRITE function is used. Lastly, it's also possible to reset the whole Bank or restore the factory Bank.

## OPTIONS FOR THE STANDALONE APPLICATION

The standalone application offers an extra menu for setting the AUDIO and MIDI devices. Under Windows it is possible to select between the available audio driver types. For better performance, use a low-latency ASIO driver, possibly the most recent driver released from your sound-card's manufacturer. Select the stereo output port, the sampling rate, the buffer size, and the MIDI input device.

VB3-II supports sample-rates from 44100 up to 384000 with no internal re-sampling. However, the best performance is achieved at 44100.

If you have two or more keyboards connected to your computer, you can enable them all at the same time, their MIDI streams are internally merged. This way you could use two 61-note controllers and play upper and lower manuals like on a real B3!



The settings are immediately applied as soon as they're changed. Close this window when done.

*Please note: the standalone application always stores the last status, regardless of the Program that was selected the last time it was used.*

## SOUND EDITING AND GLOBAL SETTINGS

The buttons on the top right corner of the main screen are used to open the editing panels and the global settings in separate windows. The choice of using separate windows, rather than embedding everything in the main window, makes it easier to organize the work-space and facilitates the work-flow by offering a wide view of all editing possibilities at a glance.



## THE EDIT ORGAN WINDOW

The organ-related parameters are organized in sections and represented as drop-down menus if they consist in lists of elements to choose from, check boxes if they consist in options to toggle, or horizontal sliders if they respond to a range of values spanning from 0 to 127.

Stopping the mouse pointer on a control invokes a “tool tip window” with useful informations related to the parameter the mouse is on; a double-click on a slider knob recalls the previous value that was set the moment the window was open.

The screenshot displays the 'VB3-II Organ Parameters' window, which is organized into several sections:

- GENERATOR SETTINGS:** Includes dropdown menus for Generator (VB3CE2 Standard), Generator Shape (OFF), and Resistor Wires (Spinet). It also features sliders for Leakage (0), CrossTalk (64), and Xtalk Shape (64). Checkboxes for 'Complex Wheels' and 'Foldback on 16' are checked.
- PERCUSSION SETTINGS:** Features sliders for Perc Level, Perc DropOut, Perc Soft Level, Perc Norm Level, Perc Fast Decay, and Perc Slow Decay, all set to 64. A checkbox for 'Perc Paradise Mod' is unchecked.
- DRAWBAR TRIMS:** A vertical list of sliders for various drawbar positions (16', 5'1/3, 8', 4', 2'2/3, 2', 1'3/5, 1'1/3, 1'), all set to 64.
- OTHER SETTINGS:** Includes sliders for Vibrato Depth (64), Vibrato V/C Mix (64), KeyClick Length (64), KeyClick Color (64), KeyClick Release (64), and KeyClick Bounce (64). It also has a dropdown for 'Pedals To Lower' (OFF), a slider for 'Bass Decay' (0), and sliders for 'Preamp Bass' (64) and 'Preamp Treble' (64).

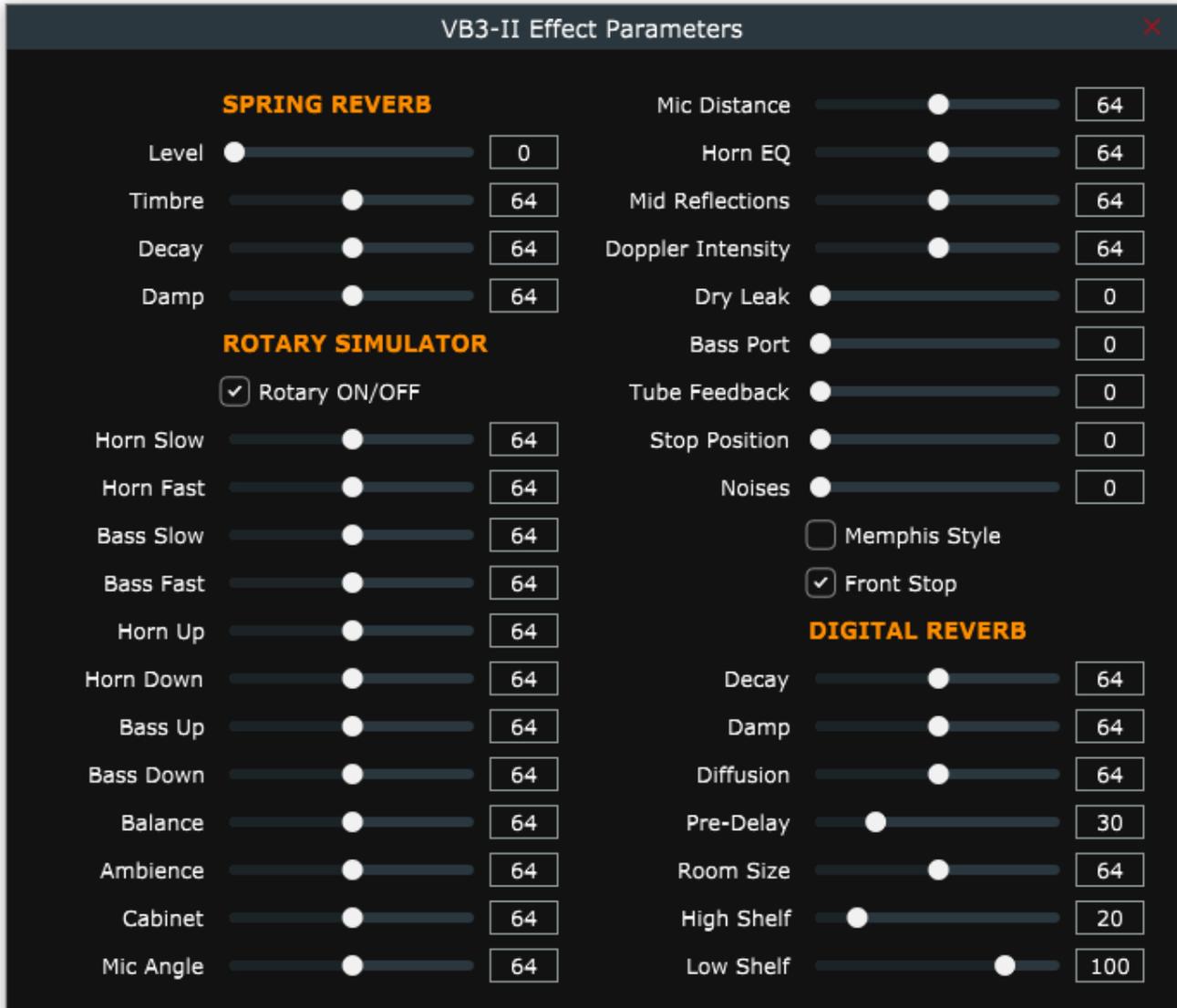
Values can also be typed directly into the readout boxes. If your computer has multiple screens, this window can be moved to a secondary screen.

## Brief explanation of all parameters:

- **Generator:** select a tonewheel generator from this list. Each generator is based on actual values as measured from real console organs of the B/C/A series.
- **Generator Shape:** select between OFF (no shaping) or 3 levels of CUT and 3 levels of BOOST. These will modify the amplitude chart of the generator values according to different positions along the generator. This parameter does not apply any equalization to the sound. Levels 1 can boost or cut starting from wheel n. 25; levels 2 start from wheel n. 52; levels 3 start from wheel n. 72.
- **Resistor wires:** these are the small wires that in the vintage organ connect the keyboards to the generator. We have three different choices: "Console: NEW" uses the original values as per manufacturer's specifications; "Console: OLD" uses modified values for a better volume scaling; "Spinet" uses the same values as "New" but disables the so-called "fold-back" on the top frequencies.
- **Leakage:** adjusts the background hum & hiss.
- **Crosstalk:** adjusts the amount of crosstalk caused by the analog circuitry. This is a very important element of the tonewheel organ sound.
- **Xtalk Shape:** since the crosstalk consists of both bass and treble tones, this parameter mixes between the presence of one or the other, left towards a "rumble" noise, right towards a "brilliant" noise.
- **Complex wheels:** are special tonewheels only used for the first 12 tones wired with the pedalboard. Unselecting this parameter will use standard sinus tonewheels.
- **Foldback on 16':** the first 16 wheels wired to the keyboards are usually folded back, thus starting from wheel n.13 rather than from wheel n.1. If you wish to use the first 12 wheels on the manuals, uncheck this option but you should also uncheck the Complex wheels.
- **Drawbar trims:** the 9 slider below this section can be used to adjust the presence of each drawbar. This will apply above the actual drawbar registrations for both the upper and the lower manual.
- **Percussion settings:** set the parameters of the percussion circuit such as the level when it's on normal or soft, the decay time when it's on slow or fast, the overall level, and the loudness loss when the volume tab is set to normal.
- **Perc Paradise Mod:** this is a "hack" that causes the percussion to never decay. What's special in this is that if you activate the scanner vibrato effect, you'll notice that the vibrato is applied to the rest of the drawbars but not to the percussion tone.
- **Other settings:** here you can adjust the depth of the vibrato circuit and the mix amount that affects the chorus settings, plus some parameters related to the generation of the KeyClick noise. Read the tool-tips for more details.
- **Pedals to lower:** bring pedal tones to the lower manual in either overlay or split
- **Bass Decay:** the pedalboard is polyphonic, but if you adjust the decay time, the last note played will decay slowly.
- **Preamp Bass / Treble:** adjust the frequency response of the organ's built-in preamp circuitry.

## THE EDIT EFFECTS WINDOW

Here is where you find all parameters related to the effects, comprising the “Leslie” rotary speaker emulation and the reverbs.



Parameters for the Spring Reverb are:

- **Level:** adjust the volume of the spring reverb which is always positioned before the Rotary effect, and does not exclude the Digital Reverb, which is positioned after the Rotary effect.
- **Timbre:** adjust the frequency response of the reverberated sound according to your taste. In real life, different types of spring reverb tanks give different timbres.
- **Decay:** adjust the length of the reverberation.
- **Damp:** when springs are made of a larger gauge they tend to dampen the sound faster. Adjust the damping effect with this slider.

Parameters for the Rotary speaker are:

- **Horn slow / fast:** adjust the speed offset of the horn for when the speed is on slow or on fast.
- **Bass slow / fast:** same as above but for the bass rotor.
- **Horn up / down:** adjust the acceleration and deceleration times of the horn for the transitions between the slow and fast speeds. When the brake is engaged, the power is taken off from the motor so the horn slows down until stopping only driven by the centrifugal force, so the time between fast and stop may be longer than from fast to slow.
- **Bass up / down:** same as above but for the bass rotor.
- **Balance:** adjusts the balance between the horn and the bass rotor.
- **Ambience:** a real amplifier stays in a real environment causing the microphones to capture the sound reflections as well as the direct sound coming from the speakers. This parameter adjusts the amount of environmental reflections.
- **Cabinet:** adjusts the amount of resonances caused by the wooden cabinet.
- **Mic Angle:** adjusts the angle between the two microphones at the horn, ranging from 0 (both microphones in the same spot) to 180 degrees (microphones at the opposite sides of the cabinets). This simulation considers only three microphones, two for the horn and one for the bass rotor.
- **Mic Distance:** adjusts the distance between the microphones and the cabinet. A longer distance results in more sound dispersion, a shorter distance results in a deeper proximity effect.
- **Horn EQ:** not all vintage rotary speakers have the same quality for what concerns the sound coming from the horn, some are brighter, some are duller or maybe just well balanced. This parameter lets you adjust the treble response of the horn sound.
- **Mid reflections:** adjusts the amount of sound reflections happening in the middle of the stereo field.
- **Doppler intensity:** the so called “Doppler” effect is the fundamental of the “Leslie” effect that causes the sound to be cyclically untuned while the sound source (the speaker) gets farther or nearer to the listened; this parameter lets you adjust the amount of this effect that is mostly caused by the sound reflections over the walls around the amplifier.

- **Dry Leak:** some of the dry sound coming from the speakers does not reach the rotating elements and is mixed with the rotating sound. Use this parameter to adjust the amount of dry signal you want to be mixed in.
- **Bass Port:** a real Leslie cabinet has a hole in the back that serves for two reasons: 1) lets the heat from the motors ventilate out from the cabinet and 2) acts as a bass tuning port, like those found on modern speakers. If you put a microphone in front of this hole you get nothing but sub-bass frequencies. Use this parameter to adjust the amount of sub-bass you want to get into the mix.
- **Tube feedback.** This is a very important parameter that works on an aspect of the whole amplification system that can drastically vary both the dynamic response and the frequency response, as well as have an impact on the overdrive. When a Leslie cabinet is set very close to the Hammond organ and is played at a high volume, there's some sort of feedback between the tubes, the transformers and the pickups of the Hammond and the speakers of the Leslie, resulting in a sound that tends to get “fatter”, the attack is “punchier” and the distortion is aggressive, giving you the feeling that some sort of energy is looping between the organ and its amplifier. Now, a genuine Leslie 122 or 147 is only 40W of power, but if you try to connect your Hammond organ to a 100W guitar amp such as a Marshall JCM900 or a Fender Twin you'll notice that the amp starts going in feedback even if you don't play any note on the organ. This is... pure analog power! Try this parameter at small steps, it can drastically change the sound in both a pleasant or unpleasant way, according to your tastes.
- **Stop Position:** you can use this parameter to find a position where the horn and rotor should “preferably” stop when you set the speed lever in the brake position and the “Front Stop” option is enabled. Please consider that not always the position you've set is reached with precision, it depends mostly on the Ramp Down times you've set... after all it's virtual reality, baby! It takes into account the kinetic energy, the gravity, the belt friction...
- **Noises:** well, a real rotary effect is far from being a silent amplifier. Your microphones will pick up not only the sound but also the wind generated by the rotating elements, and the relays that switch between the fast and slow motors. Use this parameter to adjust the amount of noises you want to get into the mix.
- **Memphis Style:** check this parameter to unplug the motors that drive the bass rotor. This way, the bass stays motionless while the horns keep spinning.
- **Front Stop:** this very sought after function causes the horn and the bass rotor to stop always in a “sweet” spot every time the brake is engaged. VB3-II uses a simple algorithm that produces this effect in a very pleasant and seamless way that you won't even notice when you're braking the rotors.

VB3-II features a built in high quality stereo digital reverb that can be adjusted in a variety of ways in order to reproduce virtually any kind of artificial environment.

Reverb settings are:

- **Decay:** adjusts the average reverb tail length.
- **Damp:** simulates various types of reflecting walls, from tiles to absorber panels.
- **Diffusion:** adjusts the diffusion of traveling waves across the reflecting surfaces.
- **Pre-delay:** adjusts the time between the direct sound and the early reflections.
- **Room size:** adjusts the size of the virtual room, from a small cabinet to a large tunnel.
- **High / Low shelf:** adjust the amount of treble or bass frequencies to be cut off the sound before starting to reverberate.

### Notes on the rotation speeds.

All sliders in the Organ and Effect edit pages, whenever moved, show a pop-up that displays the readout in both MIDI and actual value, when available. As for the Rotary speaker's rotation speeds and times, values are shown in Hz and Seconds. To convert Hz to RPM (revolutions per minute), just multiply the Hz value by 60. For example, the horn, when the Horn Slow parameter is set at 64, rotates at 0,77 Hz which translates in 46,2 RPM. All the speed values can be varied between 50% and 150% of the center value. The ramp up and ramp down times are in seconds, and can be varied between 50% and 500% of the center value.

Center values are:

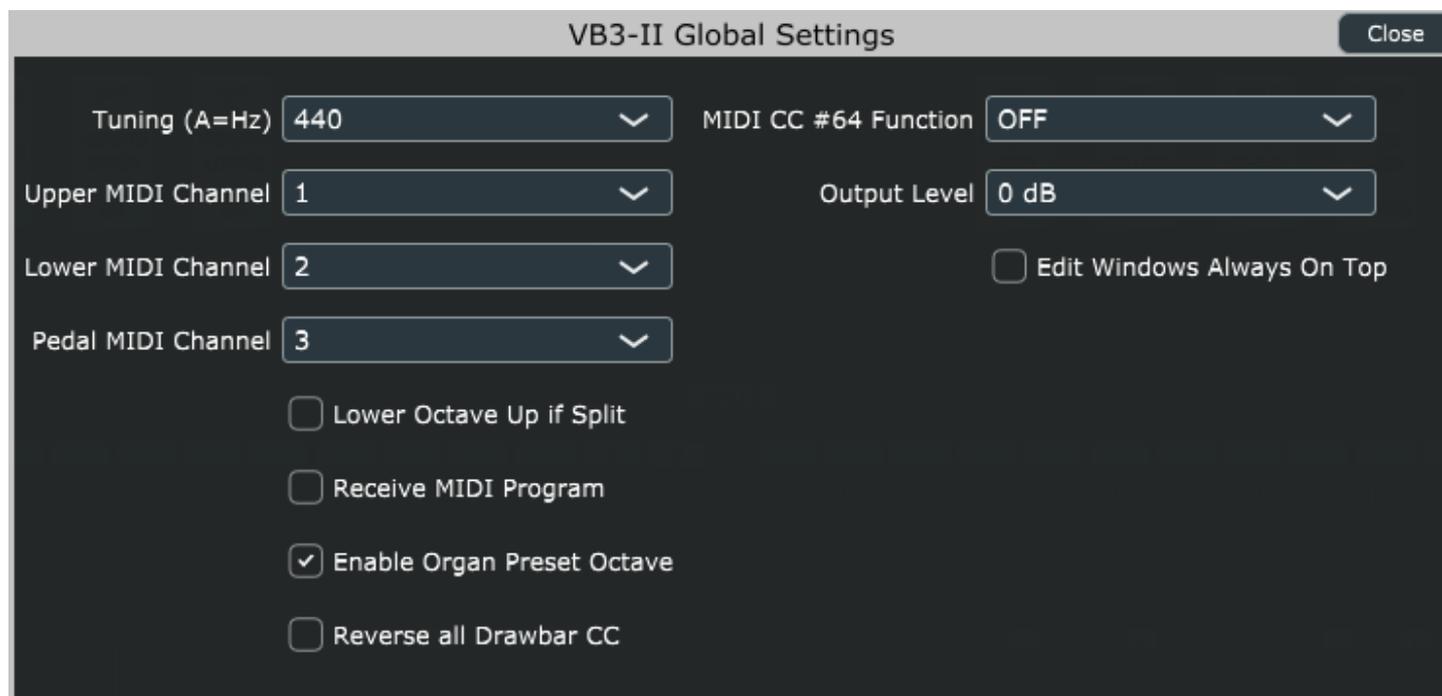
- Horn slow: 0,77 Hz → 46,2 RPM
- Horn fast: 6,9 Hz → 414 RPM
- Bass slow: 0,72 Hz → 43,2 RPM
- Bass fast: 6,4 Hz → 384 RPM
- Horn ramp up: 1 second
- Horn ramp down: 0,8 seconds
- Bass ramp up: 6 seconds
- Bass ramp down: 3,5 seconds

These times are average values as measured by a wide sample of well working and serviced vintage Leslie 122, 142, 147 and 145 models.

Due to kinetics energy, when the Rotors ramp down from fast to brake and the Front Stop option is disabled, they take a bit longer to get to full stop position.

## THE GLOBAL SETTINGS WINDOW

This panel shows the global settings that are stored in a separate file and affect the overall operation of VB3-II.



Settings are:

- **Tuning:** set the base tuning from A=430 Hz to A=450 Hz. Consider that original tonewheel organs DID NOT have any tuning option because the tonewheel generator was driven by a “synchronous” motor that was locked to the power line frequency, 60 Hz for the North American market and 50 Hz for Europe. There was no way to tune the organ to a frequency other than A=440 Hz, unless making some costly modification. Are you that guy who really believes that the 440 Hz frequency has something to do with the nazis? Do you really want to tune your tonewheel organ at 432 Hz? Please... Ok, you can... but don't tell anybody that you did :-)
- **Upper, Lower and Pedal MIDI Channel:** each manual responds to a specific channel. Beware not to set two or three manuals on the same channel!
- **Lower Octave Up if Split:** check this if you wish to have the lower manual shifted by one octave up when using the split function. This can be useful in case you wish to play chord with the left hand rather than bass notes.
- **Receive MIDI Program:** check if you wish to switch between Programs by sending MIDI Program Change events.

- **Enable Organ Preset Octave:** the tonewheel organ responds to MIDI notes from 36 to 96 (C to C), you can check this option to use the octave between 24 and 35 for switching the drawbar preset, just like on a real B3.
- **Reverse all drawbar CC:** if you don't have a drawbar controller yet, please visit [www.GenuineSoundware.com](http://www.GenuineSoundware.com) or [www.Crumar.it](http://www.Crumar.it), but if you still want to use your generic controller with regular faders, you might find this option useful as it reverses the MIDI response of all drawbars.
- **MIDI CC#64 function:** the CC #64 is usually the sustain pedal, that in VB3-II can be used in a variety of ways. Choose whether it has to switch the speeds of the rotary speaker emulation, in a latched way (push – push), or in a momentary way (push for fast, release for slow). Note that the switch is done between FAST and SLOW or STOP according to the position of the speed lever on the GUI. If you really want to apply the sustain to the upper, to the lower manual or to both manuals. Hey, do you really want to use the sustain function? There was only a way to sustain notes on a real tonewheel organ, google for *Keith Emerson...*
- **Output Level:** adjust the overall output level from -3 dB to +3 dB. Default is zero.
- **Edit Windows Always On Top:** this option causes the Edit windows always stay on top of other windows. Enable it if they appear behind the main window (required for some Mac host programs).

Remarks on the output level:

The tonewheel organ is a very dynamic sound that can go to almost silent to very loud, it's not easy to have it fully dynamic in a digital system without incurring in digital clipping. VB3-II has a built-in de-clipping function that tries to prevent digital clipping. If you feel that it plays too soft, you should try playing a “full” organ with a bit of overdrive and the chorus on to verify that it's already using all the available headroom. On the other hand, if you think that it plays too loud, you're probably forgetting that the dynamic on a tonewheel organ, that unlike a piano does not have velocity sensitive keyboards, is given by using the “swell pedal”.

Just try to adjust the volume and the output level in a way that fits your requirements the best you can. The rest depends on the cascaded devices (other effects in the DAW, or mixing desk, amplifiers, etc.)

## MIDI LEARN

VB3-II features an advanced MIDI “Learn” system for helping with mapping MIDI CC messages to the parameters. By default, all “performance” parameters are already mapped to specific CC numbers (table below), but it's very easy to change the assignments to fulfill different requirements.

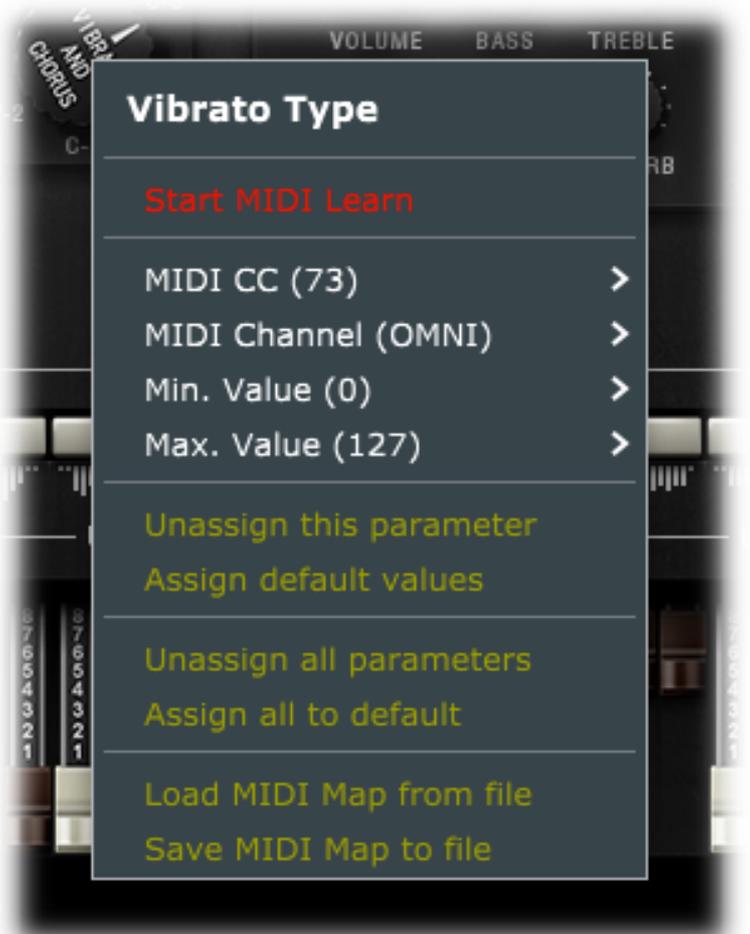
Right click on any parameter on the interface (also in the separate editing windows) to access the MIDI Learn menu.

Click on “Start MIDI Learn” to start learning the MIDI parameters coming from your controller. A dialog window appears which you should give confirmation to if your assignment is done as expected, or you can click on “Abort” and abandon the operation.

If you're creating your map but you don't need to catch the CC numbers from your controller, you can still use the other menu options to set the values manually. Set the CC number, the MIDI Channel (1 to 16 or OMNI), the min and max values. If min and max are swapped (i.e. min is major than max) the parameter will respond reversed.

You can “unassign” a parameter if you don't want it to be controlled by any MIDI message, or you can assign default values if you're unsure what assignment to give to it.

Last but absolutely not least important, you can save your entire MIDI map to a file or load it from a previously saved file, so you can have more mappings ready for different controllers that you might have.



## DEFAULT MIDI MAP

The table below shows the MIDI CC numbers assigned by default. All parameters receive a range of values between 0 and 127 and are set to Channel "OMNI" (can receive on any channel).

PARAMETER NAME	C.C. NUMBER	REMARKS
Volume	7	
Drive	76	
Reverb	91	
Key-click	75	
Bass	8	
Treble	10	
Drawbars Upper SET A	40 ~ 48	
Drawbars Upper SET B	12 ~ 20	
Drawbars Lower SET A	50 ~ 58	
Drawbars Lower SET B	21 ~ 29	
Drawbar Pedals 16'	33	
Drawbar Pedals 8'	35	
Vibrato Type	73	Values: 0, 27, 52, 78, 102, 127
Vibrato Upper Switch	31	
Vibrato Lower Switch	30	
Percussion On	66	
Percussion Soft	70	
Percussion Fast	71	
Percussion Third	72	
Swell Pedal	11	
Rotary Effect Switch	85	
Rotary Effect Slow/Fast	1	Values: <32 = slow, >95 = fast, middle = stop
Rotary Effect Run/Stop	68	Values: 0 = stop, 127 = run

VB3-II recognizes the GM "All Notes Off" command, CC #123 value 0.

## ROTARY SPEAKER EFFECT: GSiRotary

Starting from version 1.1.0 released in September 2018, GSi VB3-II comes with a separate Rotary effect plugin/standalone that can be used with any audio source and is based on the same rotary effect built into VB3-II. It's called GSiRotary and is free for all VB3-II registered users.



GSiRotary shares the same Program Bank, the same MIDI Map and the same Settings as the main program VB3-II and starts activated if VB3-II is activated, otherwise starts in "Demo mode".

In the middle of the screen there are the three main knobs, Volume Drive and Reverb to adjust the related parameters, on the bottom there's the 3-position lever switch for the rotary speeds, and on the top there's the display for the current Program, along with the up and down buttons for scrolling programs. Click the Program name to open the pop-up menu showing all Programs in the Bank.

Click EDIT to open the editor window with all parameters. Here you'll find the same parameters as the "Edit Effects" window from VB3-II except the Spring Reverb.

The BYPASS button puts the whole effect in bypass, i.e. the output is an exact copy of the input. The HELP button opens a menu with useful links.

GSiRotary comes in 64 bit VST2, VST3 and Standalone for Windows and 64 bit AU, VST2, VST3 and Standalone for OSX.

GSiRotary isn't sold separately from VB3-II and doesn't require extra payments.

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