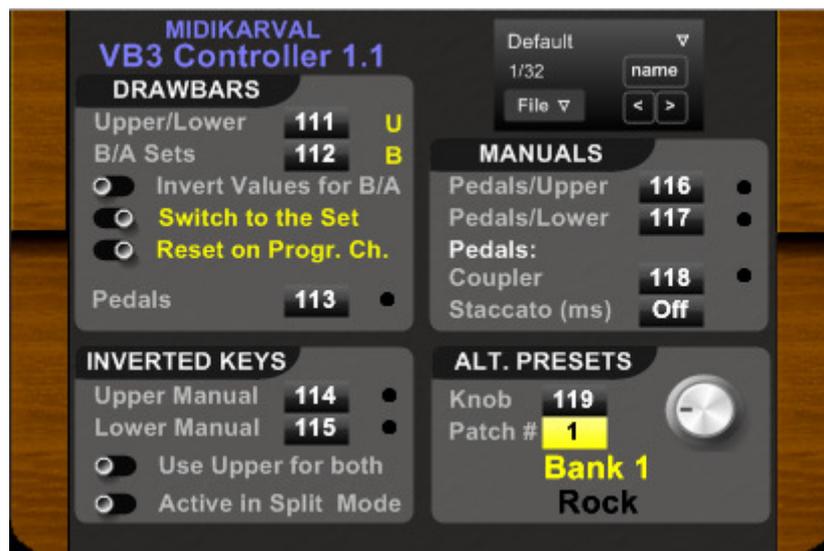# VB3 CONTROLLER 1.1
(*by MidiKarval*)
USER MANUAL

The *GSi VB3*® (www.genuinesoundware.com) is an excellent and cost effective virtual tonewheel organ which simulates with the greatest accuracy the Hammond B3 sound, but it's also capable of two other organ simulations, the Italian transistor organs of the seventies, and the red-tolex organs played by famous pop bands of the sixties. Amongst other valuable features, it has, as the original B3 organ, two separate sets of drawbars per each manual.

The MidiKarval **VB3 Controller** is a midi processor VSTi that allows you to control, using a midi controller keyboard or its GUI, the VB3's five drawbar sets (upper manual A and B sets, lower manual A and B sets, and pedals) from a single set of nine physical drawbars (sliders or knobs).

Moreover VB3 Controller also has the following features:

- *"Inverted Keys"* : on the original tonewheel organ that VB3 emulates, the bottom octave notes have reverse color keys (*"inverted keys"*) that call up preset sounds. VB3 and separately VB3 Controller mimics this use of note keys to provide the player with presets.
  If you are using a 61 note midi controller keyboard or two separate keyboards, then using the "*Inverted Keys*" function causes the upper and/or lower manual's note playing area to be limited to four octaves; the bottom octave of your keyboard(s) (Upper and/or Lower Manual) can be designated as "inverted octave" and you can use this bottom octave's A# and B keys for switching respectively to VB3 Set A and B; the remaining bottom octave keys choose the 9 VB3 pre-set drawbar settings or the *"Alternative Presets"* (see below), whilst the C key triggers the "cancel" (no sound) status;

- *"Alternative Presets"* : provide 6 banks of 18 presets each (9 for the upper manual drawbars and 9 for the lower manual drawbars). Each preset can be called up by pressing one of the keys (C# to A keys) of your midi keyboard(s) "inverted octave" and shows the relevant

drawbar positions on VB3, plus you can also temporarily change these preset drawbar settings. (The bottom C key is cancel sound or mute). You have also the choice to use only the upper manual's "inverted octave" to call up the presets of both the upper and the lower manual.

Unlike VB3's regular presets, the Alternative Presets are drawbar position settings only. They do not alter rotary settings, percussion, chorus/vibrato etc. Moreover, unlike VB3 presets, they will always default to their original factory settings (which you can modify, however, editing the "VB3C#.apb" files) when you next access them. They do not retain user settings;

- *"Split Mode"* : you can reserve the bottom two octaves of your 5 octaves midi keyboard(s) for playing the VB3 pedalboard. Moreover, using these pedalboard octaves, you can play in unison also the lower manual, as many great jazz organists do, and choose to make the pedalboard sound "staccato", like an upright bass. According to Joey DeFrancesco, this is *the secret to kicking bass* on organ (see *Keyboard Magazine*, n. 6/1999, page 50);

- *"Programs Section"* : you can store your favourite VB3 Controller's settings in one of the 32 renamable programs for future use.

CREDITS

Endless thanks to my friend **Thomas Adamson**, who has been much more than the beta tester of the VB3 Controller: without his continuous support, patience, encouragement and very good ideas VB3 Controller would have never been what it is.

Many thanks also to **Guido Scognamiglio** (GSi) for having created such a beautiful instrument as VB3; I'm amazed every day with the accuracy with which it can reproduce the sound and the feeling of the real thing.

And, at the end, my special thanks to **Cristina**, my partner, who has endured with endless patience the many hours I've spent programming this software.

INSTALLATION

Extract the content of VB3Controller_1_1.zip (including all the .apb files) to your VSTplugins folder. As both VB3 and VB3 Controller are VST plugins, you have to open them in a VST host application (we recommend EnergyXT or Hermann Seib's VSTHost), connecting the host midi input to the VB3 Controller input and its output to the VB3 input. The following diagram shows the connection example using *EnergyXT*:
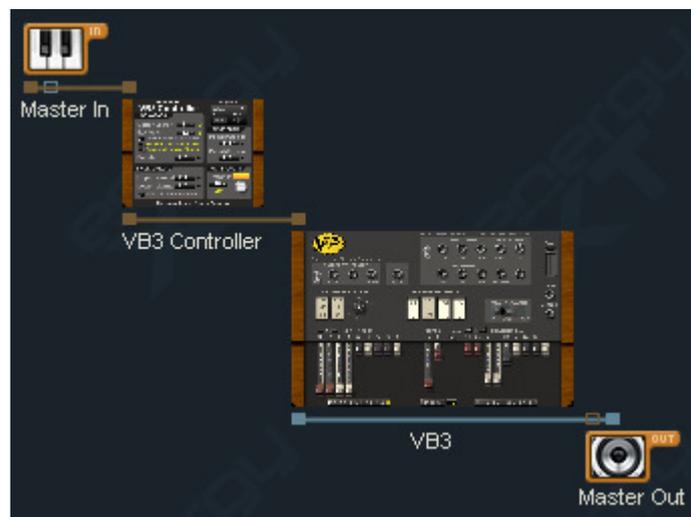
Please, be sure that the *only midi flow* reaching the VB3 plugin comes from the VB3 Controller, otherwise the results could be unpredictable.
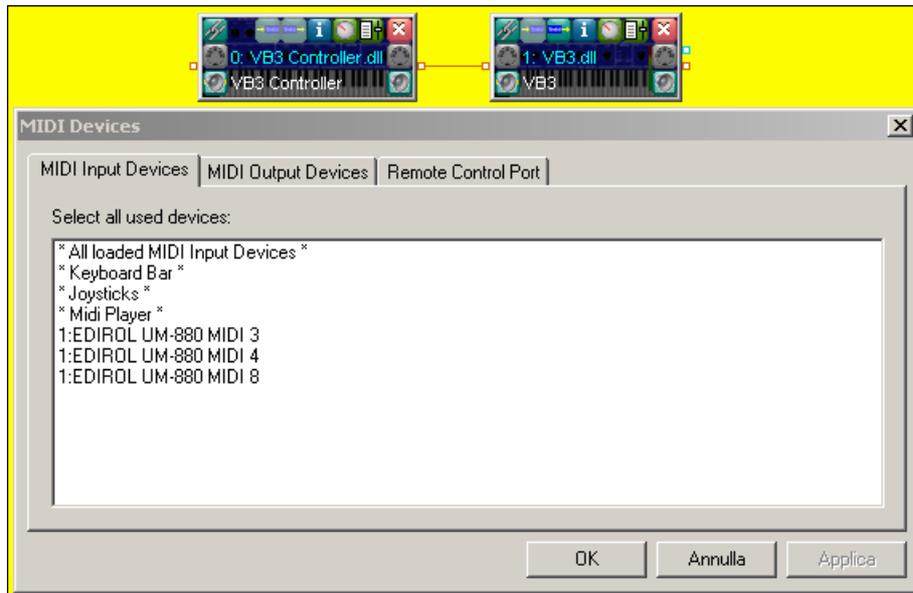
For example, if you use *VSTHost*, only the VB3 Controller should be connected to the midi input devices, whilst all VB3 midi input devices should be disabled (left-click on the enabled ones while pressing the <ctrl> key of you PC keyboard), as shown in the picture on the left. (i.e. No blue bar showing across any midi device)

The midi symbol on the right in the small VB3.dll GUI is the button used to switch on and off incoming midi messages.

The top left-hand button in the VB3.dll GUI is the button used to access the link to VB3 Controller.

VB3 Controller requires the use of some of your midi keyboard's (or other devices able to send midi control messages) buttons and knobs or sliders (even if you can activate/deactivate the VB3 Controller functions also clicking directly on its labels).

You can use VB3 Controller with only one midi keyboard, even if the ideal set-up is two keyboards (the first one, transmitting on midi channel 1, for playing VB3's upper manual and sending the CC messages and the second one, transmitting on midi channel 2, for playing the VB3's lower manual).

Each black label in VB3 Controller shows the CC number that has to be sent (with the value of 0 or 127) in order to activate/deactivate a specific function: you can change the CC number sent by your buttons to match the one already indicated in the label (*recommended system*) or choose another value (clicking with your mouse's right button on the label and choosing one of the values that appear in the relevant drop list), matching the CC number sent by your buttons/knobs. In the latter case you can save your new setting in one of the programs provided by the Programs Manager.

In the "USING VB3 CONTROLLER" paragraph we assume that you use the default CC numbers.

It's advisable to use "on/off" buttons for all functions other than:

-   the *"Inverted Keys"* function (upper and/or lower manual), for which a toggle button may be used if you want to "sacrifice" your keyboard's bottom octave, only if and when you want to use it as "inverted octave";
-   the "Banks Knob" for which (I guess…) a knob is the better choice.

Of course, your keyboard should have also nine sliders (or knobs), to send CC# 12 to 20, for moving the VB3 drawbars.

Please remember that most of the labels act not only as drop-lists (using your mouse's right button) for choosing the relevant CC number, but also as buttons

(using your mouse's left button) for activating the relevant function. So you can use VB3 Controller even if your midi keyboard doesn't have enough buttons or knobs.

USING VB3 CONTROLLER

THE "DRAWBARS" SECTION

"**Upper/Lower**": if you send, using a button from your master keyboard, the CC# 111 message with a value of 127 (or click on the relevant label) you can use your midi keyboard drawbars to move the VB3 **L**ower drawbars, whilst sending a CC# 111 with 0 value (or clicking on the same label again) allows you to now move the VB3 **U**pper drawbars instead (the yellow letter at the right of the label shows the active status).

"**B/A Sets**": if you send, with another keyboard button a CC# 112 message with the value 127 (or click on the relevant label) you can use your master keyboard drawbars to move the VB3 **A** drawbars' set of either the upper or lower manual (depending upon the one chosen previously with the *"Upper/Lower"* function), whilst sending a 0 value (or clicking on the same label again) allows you to move the VB3 **B** drawbars' set of the same manual (the yellow letter at the right of the drop list shows the active status).

"**Invert Values for B/A Sets**" selector can be useful if you use a knob (instead of a button) to switch from the A drawbars' Set to the B Set. By moving the *"Invert Values for B/A"* selector to the right-hand position using your mouse (the label becomes yellow) you will find that by turning the CC#112 knob to the left, the A Set is activated, whilst turning the CC#112 knob to the right, the B Set is activated (*this can be visually preferable, since on VB3 the A Set is on the left and the B set is on the right*).
Since buttons provide the 0 and 127 values turning fully anti-clockwise and fully clockwise respectively, provision has been made for the "B/A" Sets selector not to require a full anti-clockwise/clockwise movement. A small movement will change status.

The "**Switch to the selected Set**" selector allows you to choose if VB3 will be switched to the chosen drawbars' set (selector in the right position and yellow label) or if you want to modify the drawbar positions of the alternative set from the one you are using (selector in the left position and grey label).

The "**Reset on Program Change**" selector resets VB3 Controller to Upper B Set every time a program change is sent to VB3. When you send a program change message to VB3 (provided that its "Receive MIDI Program Change" option is set on "yes") it resets itself to the Upper Manual B set. Activating this selector allows synchronisation between VB3 Controller and VB3.

"**Pedals**": if you send, using your master keyboard button or rotary control knob, the CC# 113 message with value of 127 or click on the relevant label (led on), you can use your master keyboard's first two drawbars to move the VB3 Pedals drawbars, whilst sending a 0 value or clicking on the same label again (led off) allows you to move the VB3's Upper or Lower Manual drawbars as normal .

THE "INVERTED KEYS" SECTION

A CC# 114 message with a 127 value triggers the "**Inverted Keys**" function for the Upper Manual: the A# and B keys of the lowest octave of your five octaves keyboard can now be used for switching respectively to VB3 Set A or B, whilst the C key will now activate the "cancel" (no sound) status and all the other keys will

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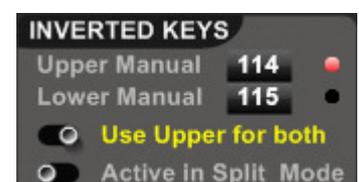
choose one of the VB3 9 preset drawbar settings or one of the "*Alternative Presets*" provided by VB3 Controller (see below). This same function applies to CC# 115 message with reference to the lower manual.

You can get the same results clicking on the two labels in this section.

If you move the "**Use Upper for both**" selector (yellow label) to the 'right-hand' position, pressing one of the keys (C# to A keys) of your upper manual "inverted octave" you call up the relevant preset (internal or *alternative*) of both manuals' "inverted keys" (this is useful if you want to have consistent sounds on both manuals), maintaining in any case the possibility to change only the presets of the lower manual (provided that the lower manual's "inverted keys" function is active). The "Use Upper for both" function doesn't work for Bb and B "inverted keys", so you can temporarily change the preset of the upper manual without affecting the sound of the lower one.

The "Inverted Keys" function is not active by default in Split Mode, unless you move the "**Active also in Split Mode**" selector (yellow label) to the 'right-hand' position.

THE "ALTERNATIVE PRESETS" SECTION

A special feature of VB3 Controller is that it provides, in addition to VB3's programs and presets, a further six banks (*two banks in the demo version*) of "Alternative Presets". These presets are called up from the *"Inverted Keys"* section of the Upper or Lower manual, if activated (see above), or from the additional extra octave below the 61 playing keys (if you have a keyboard with 76 or 88 keys), when the *"Inverted Keys"* option is de-activated.

The activation/deactivation of the *"Alternative Presets"* function and the choice of one of the six available banks is provided by the knob you see in the picture. At the full anti-clockwise position, the function is deactivated (the bank number is substituted by "Off"). By turning the knob gradually to the right you can activate the function and choose the bank you want to use: the bank number ("Bank 1" in the picture) and the bank name ("Rock" in the picture) are shown above as an example.

The knob can be turned directly on the VB3 Controller interface or by sending from a knob on your midi keyboard (or other midi device) a CC# 119 message (user-definable like the other black labels) with values from 0 to 127.

Each bank contains 9 presets for the Upper Manual (from C# to A keys on midi channel 1) and 9 presets for the Lower Manual (from C# to A keys on midi channel 2)

In all cases the C key triggers the "cancel" status, and Bb/B keys switch to drawbars Set A and to Set B respectively.

Calling up a preset makes the VB3 drawbars move to their corresponding preset positions. You can at any time alter these drawbar positions, but whenever you recall the preset it will revert back to its original drawbar position.

Since VB3 (with or *without VB3 Controller*) automatically saves the modifications you make to its programs (*you have to use the VB3 "Revert to Factory Presets" option to recall all the original programs*) you may want to use the *"Alternative Presets"* with just one specified VB3 program, so as not to modify any of the other VB3 programs.

This is possible by choosing any one of the 32 VB3 programs so that it becomes the one program only that is linked to the *"Alternative Presets"* action through the "**Patch #**" yellow label. (*By default it is set to VB3 program no. 1 as shown in the picture above*).

In effect, you are 'patching' all the "Alternative Presets" to just one of the 32 possible Presets in VB3.

C# and D Presets in Alternative presets Bank 1 use the original drawbars' setting of VB3's program no. 1 (*B set and A set respectively both for the upper and the lower manual*).

Note that when you set "Alternative Presets" to be patched to Patch# 1 as shown in the above picture, and then subsequently when you switch onto any Bank using CC# 118

messages, although you now lose VB3's No. 1's factory default Preset settings whenever you move drawbars, you still retain the VB3 factory settings in the Alternative Presets C# and D in Bank 1.

If however you set the *"Patch #"* label to the "--" position, the "Alternative Presets" become patched to whatever <u>current live VB3 program</u> you are on when you subsequently switch on the "Alternative Presets" Bank button CC# 118.

Moving the drawbars now, will alter that particular linked VB3 preset drawbar setting, instead of VB3's Preset # 1's drawbars (*or other user selected number from the possible 32 Preset Numbers*)

The "Alternative Presets" banks come from the factory with great drawbar settings and each bank is dedicated to a music style (Rock, Jazz, Soul/R&B/Funk, House, Reggae, Miscellaneous), but you can edit and change the settings and the name of each bank as explained in the "Banks Files" paragraph of this manual.

THE "MANUALS" SECTION

Sending the CC# 116 message with a value of 127 (led on) splits your keyboard into two sections: the lower two octaves play the pedals whilst the upper three octaves play the upper manual (an 0 value de-activates the Split Mode).

In the same way, a CC# 117 message triggers the splitting between pedals and lower manual.

Sending the CC# 118 message with a value of 127 (led on) the "**Coupler**" function is activated and, using such pedals' octaves, you can play in unison the pedals' sound and the lower manual, as many great jazz organists do and choose to make the pedals' sound "staccato" (like an upright bass, whilst "*the meat of the bass comes from the lower manual sound*"). According to Joey DeFrancesco, this is *the secret to kicking bass* on organ (see *Keyboard Magazine*, n. 6/1999, page 50). Changing the value in the "**Staccato**" label you can activate/deactivate the "Staccato" mode and select the relevant length (expressed in milliseconds, from 20 to 400 ms.).

As already said, you can activate/deactivate such functions clicking on the relevant labels with your mouse's left button, whilst you can change the value shown in the labels with your mouse's right button.

THE PROGRAMS MANAGER

You can save your personal settings in one of the 32 programs provided by the Programs Manager, giving a name to each one, and save the relevant file (*.txt) for future loading.

THE BANKS FILES

Together with VB3 Controller and this manual you have received the seven files, with the "apb" extension (meaning "Alternative Presets Bank"), you can see in the picture on the right.

The six numbered files (VB3C1, VB3C2, etc.) contain the settings of the six "Alternative Presets" banks, in the same format used by the VB3.dat file that you can see in the picture on the left.
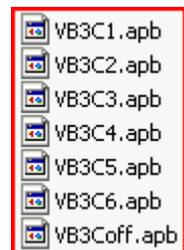
Each row represents a preset (PresetU1 means the upper manual preset no. 1, PresetL1 means the lower manual preset no. 1, and so on).

The following 9 digits corresponds to the relevant drawbar positions.

The last row (Bank=) hosts the bank name.

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You can edit these numbers and the bank name with a text editor, but be careful not to leave blank spaces at the end of each row and between rows. Also, be sure that each number has 9 digits (each one from 0 to 8).
The last file (VB3Coff.apb) should not be editied (in effect it is empty), because it is functional to the "off" position of the "Alternative Presets" knob.
It may be a good idea to backup the original files, before editing them; although 'registered owners' of VB3 Controller can always obtain the original files simply by writing to support@midikarval.net.

The demo version of VB3 Controller is fully functional for a 15 minutes period of time. It then expires and you have to remove VB3 Controller from your host and re-load it to use it again.

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www.midikarval.net