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INTRODUCTION

Synplant is a software synthesizer with a genetic approach to sound creation. Instead of creating patches the conventional way by turning dials and knobs, Synplant lets you explore a world of organic sounds by planting seeds that grow into synth patches. The purpose of this product is to move the focus away from the sometimes intricate and difficult process of sound synthesis and instead let you develop sounds by simply using your ears.

You will find that creating synth patches with Synplant will be as easy as listening and deciding what you like and then having the sounds evolve in the directions you desire. Although Synplant is exceedingly easy to use, whatever you do, do not let its relative simplicity fool you. Beneath its straightforward and playful interface you will find a versatile synthesizer of the utmost quality with lots of character. Also, once you are ready to get your hands dirty and dig deeper into the anatomy of Synplant you will have the option to crack open your sound seeds and modify their underlying genetic code.

Synplant features a built-in step-by-step tutorial which automatically starts the first time you launch the plug-in. Because of Synplant's unique user-interface, we strongly suggest that you go through the tutorial at least once.

/ Magnus Lidström
Synplant Bulb

In the center of the user-interface you will find the Synplant bulb that contains the sound plant.

Seed and Branches
The seed contains a certain sound. By clicking and dragging inside the bulb, you grow branches from the seed. Each branch has a unique timbre. Closest to the seed, all the branches sound exactly the same. The farther out you pull the branch, the more different it will sound from the original seed.

If you find a branch that you like, you can cut it off and re-plant it as a new root-seed by simply clicking the Seed button in the center of the bulb. If you cannot find a branch that you like, simply retract one of the branches entirely to make it sound as the original seed, then re-plant it and you can grow 12 new branches.

An easy way to fully retract a branch to its root is to click the branch with the control-key (Windows) or command-key ⌘ (Mac) held down. In case it is hard to pin-point the exact desired length, hold down the shift key while dragging to obtain a finer resolution.

Whenever you click and drag a branch, Synplant will automatically trigger a note to play it. If this is undesirable you can turn it off using the MIDI Config Dialog which is described in detail later in this manual.
**Key Ring**
Each branch corresponds to a note in an octave on your MIDI keyboard, so when you grow branches different keys will trigger different sounds. Again, the longer you grow the branches, the more different from each other, and from the seed, the notes will sound.

You can click the **Key Ring** surrounding the bulb to play notes without changing the lengths of the branches.

**Mod Wheel Ring**
Using the mod wheel on your MIDI controller you can grow all the branches simultaneously. The **Wheel Scaling** slider determines how much the branches will grow. You can also click and drag the dashed **Mod Wheel Ring** inside the bulb to achieve the same effect.

**Rotation Control**
In the periphery of the bulb you find a smaller circle. This is the **Rotation Control**. By dragging it, you can change which branches are triggered by which keys. **Tip:** It is great fun automating this parameter to have the notes constantly trigger slightly different sounds.

---

**Surrounding Sliders**

Surrounding the plant we find four important and easy accessible controls. Just as with the branches, you can click any slider with the control-key (Windows) or command-key ⌘ (Mac) held down to reset it to its default. Holding down the shift key while dragging gives you a finer resolution.

---

![Figure 2  Surrounding Sliders](image)
Tuning
The Tuning slider lets you adjust the pitch of the entire plant by up to one octave up or down. When planting a new seed, Synplant tries to figure out the pitch of the sound so that the center of the slider represents a correctly tuned pitch. However, occasionally, it might make a mistake and you will need to manually tune the sound using this slider.

Atonality
The Atonality slider is somewhat intricate. Think of it as a slider that determines what type of sounds the plant will produce: playable sounds or sound effects. With lower settings, longer branches will become more musical and "playable". Higher settings create atonal sounds and weird sound effects. Furthermore, higher settings can make melodic sounds lose their perfectly tuned scales, mimicking the effect of poorly tuned acoustic instruments.

Please note that the Atonality value has a very subtle effect on short branches and a very drastic effect on fully grown ones. If you leave it at a low setting, you can be almost certain that your plant will keep its tuning when it grows. This is especially useful if you use the mod wheel to modulate a pitched sound.

Effect
The Effect slider adjusts the effect mix and panning amount. It lets you go from a completely dry monophonic sound to a wet voluminous sound. (The exact depth and character of the effect depends on the sound-seed genome, which is described later.) Stereo panning is normally related to branch position in the bulb, so that left-side branches pan to the left and vice-versa. By reducing the effect amount, this panning effect is also reduced.

Note that although Synplant is "polyphonic", there is only a single global reverb. It can happen that the branches of your plant attain different settings for the reverb when they grow out. In this case, the last pressed MIDI key determines which reverb settings are active. For example, one branch might have a long reverb tail while another one has a short. If you play the branch with the long tail and immediately after that the one with the short tail, it will cut off the reverb.

Release
The Release slider controls the release time of the sound, i.e. the time it takes for the sound to fade out completely after the key has been released. Certain seeds do not have a sustained quality by nature (they are "one shot"). In this case you may not notice much difference if you increase the release time. With long reverberant sounds, the lowest Release settings will "gate" the built-in reverb so that it will be quickly muted when you release the keys.
Bottom Sliders

At the bottom of the window you have three additional controllers that are also part of the patch. Just as with the surrounding controllers, you can click any slider with the control-key (Windows) or command-key ⌘ (Mac) held down to reset to its default etc.

Wheel Scaling
This slider controls how much the mod wheel will make the branches grow or in other words how much it will modulate the sound.

Velocity Sensitivity
Velocity Sensitivity determines how much MIDI velocity affects the patch. On the far left (0%), velocity is ignored entirely. The default setting of 50% should be well-adjusted for most sounds.

(There is also a global velocity response curve that is not part of the patch. Read the MIDI Config Dialog section for more information.)

Master Volume
This is the main volume control. Its range goes from infinite negative dB (i.e. entirely silent) to +20 dB. The normal volume of +/- 0 dB is in the middle. Please observe that Synplant has a built-in saturating limiter and raising the volume excessively will make it distort. If this happens, the bulb will start to flash with a red light.

Toolbar

Located at the top of the interface is the Synplant toolbar. Figure 4 shows the different controls on the toolbar. They are described in detail below.
Main Menu

The Main Menu is reached from the button located in the upper-left corner of the Synplant user interface. The menu contains the following choices:

**Undo / Redo**
These choices undo or redo recent changes to the loaded patch. The "undo history" is virtually unlimited, but it will be cleared every time you close the editor window. Undo and Redo are also available as buttons in the Synplant toolbar.

**Open Patch…**
This item will display a file dialog where you can browse for patches on your computer. You can preview patches directly from within this dialog without needing to open them first. Simply select a ".synp file" and you will be able to play it directly from your MIDI keyboard. Click OK to load the selected file into Synplant or Cancel to return to your former patch.

Another way to reach the patch browser is by clicking the Patch Selector and choose Browse Patches….

**Save Patch As…**
This item lets you save the current patch to disk (to a so called ".synp file").

**Copy Patch**
This copies the currently loaded patch to the clipboard. *(Note that the patch format is in clear text format. It is actually possible to paste the patch into a text-editor, make modifications there and copy it back into Synplant.)*

**Paste Patch**
This pastes a patch from the clipboard into Synplant.

**New Random Seed**
Use this menu item to plant a new random seed. All sliders (except Tuning) will preserve their settings. The Atonality slider affects the type of seed being created. If the slider is turned all the way down to 0, the seed will typically produce a melodic and playable sound. If it is turned all the way up to 100 the seed is more likely to become an unpitched sound effect.

Optionally, you may hold down the control-key *(Windows)* or command-key ⌘ *(Mac)* and click on the Seed to perform this action. While holding down the button you will hear a preview of the new seed.

**Plant Chosen Seed**
This menu item does the same as clicking the seed inside the bulb, i.e. it plants the currently selected branch as a new seed.

**Clone Selected Branch**
Use this menu to clone the currently selected branch so that all keys will play exactly the same sound and the mod wheel will work identically for all keys. This function is also easily available if you right-click a branch *(or control-click on Mac).*
Manipulate Genes
Choose this menu to open up the gene editor where you access and edit the genome of the sound seed. Clicking the Gene Manipulation button does exactly the same.

MIDI Config...
This menu displays the MIDI Config Dialog which you use to edit settings concerning how Synplant responds to and transmits MIDI. Read the separate section on the MIDI Config Dialog further down for more info.

Reassign MIDI Controllers
This item opens the MIDI Controller Reassignment overlay. You can click the small rounded boxes on top of the sliders, buttons etc to begin "learning". Turn a knob on your MIDI controller and it will be mapped to the function in question. To reset a re-assigned controller value to its default, simply click the box and then click somewhere else. To edit a controller value manually, click the box and drag the mouse up or down. Drag it all the way down to remove the assignment entirely (this will be displayed as "---").

All controller assignments can be saved and loaded from the MIDI Config Dialog window. You can also assign a default mapping that will automatically load every time you start Synplant.

To exit this overlay, click once again on Reassign MIDI Controllers or click the cross in the upper-right corner.

Register...
This menu item lets you register (or unregister) your copy of Sonic Charge Synplant. Before Synplant is registered you are allowed a limited number of weeks in "trial mode". You can purchase your registration key from the Sonic Charge site at http://soniccharge.com. Please read more in the section titled Evaluation.

If your Synplant is already registered, you may use this menu item to unregister it (for example if you are going to sell your computer or if you have temporarily registered Synplant on a shared computer).

Read User Guide
Select this menu item to open this user guide.

Run Tutorial
Use this menu to display the introductory tutorial.

Auto-check for Updates
This menu item switches the automatic version checker on and off. When switched on, Synplant will check against the Sonic Charge site every once in a while to see if there are any available upgrades.

Go to soniccharge.com
Select this menu item to open our web page in your browser.

About
This item displays the about box with detailed version info, credits etc…
Gene Manipulation

Click the *Gene Manipulation* button to open up the gene manipulation window. This allows you access to the genome of the sound seed, where each individual gene can be tweaked to your satisfaction. Just keep in mind that you are editing the genome of the seed and that any grown branches may produce sounds that could be radically different from the seed.

Figure 5  DNA Spiral

To edit a gene, click either on the ring representing its value or on its name and drag left or right. Control / command–click to reset the value to 0.5. Shift-click to perform finer changes. As you move the mouse vertically over the DNA helix, it will automatically scroll to give you access to all 37 genes.

Clicking the little ? button at the top of the gene manipulation window turns on the interactive help function which will give you detailed descriptions of the genes. A complete *Genome Mapping* and a blue-print for *Synplant's Voice Anatomy* are also included later in this user guide.

**Undo / Redo**

As described in the *Main Menu* section above, these buttons undo or redo recent changes to the loaded patch. The "undo history" is virtually unlimited, but it will be cleared every time you close the editor window.

The *Undo* and *Redo* buttons can be mapped to MIDI controllers using the *Reassign MIDI Controllers* menu.
Patch Selector / Browser

**Synplant** ships with a broad selection of factory patches in various categories. Use the **Patch Selector** to browse them. Patches are stored as individual files on your hard-drive (with the file extension ".synp"). The **Previous** and **Next** buttons flanking the patch name load files located in the same directory as the currently loaded patch. To open files in another directory, click the patch name and choose **Browse Patches**... from the popup menu.

You can preview patches directly from within the dialog without needing to open them first. Simply select a ".synp file" and you will be able to play it directly from your MIDI keyboard. Click **OK** to load the selected file into **Synplant** or **Cancel** to return to your former patch.

The **Previous** and **Next** buttons can be mapped to MIDI controllers using the **Reassign MIDI Controllers** menu.

MIDI Config Dialog

With the **MIDI Config Dialog**, you configure how **Synplant** responds to and transmits MIDI data. Each instance of **Synplant** has its own configuration and this configuration (together with any MIDI controller reassignment) is stored with your song data when you save your project. MIDI configuration is not stored in **Synplant** patch files. Instead you can load and save MIDI configurations to separate files with the file extension ".scmc".

(Owners of Sonic Charge µTonic may notice that µTonic uses the same file extension for its MIDI configuration files. In fact, you can create configurations for both Synplant and µTonic and store in the same ".scmc file".)

![MIDI Config Dialog](image)
**Input Channel**
This is the MIDI channel that this instance of **Synplant** will respond to.

**Output Channel**
This is the MIDI channel that **Synplant** will use for sending midi notes. Whenever you click and drag a branch (or click on the Key Ring) **Synplant** will play that note and transmit it over MIDI as well. *(Note: MIDI output is only possible with the VST version. Audio Units do not support this.)*

Depending on the facilities of your host application you can use this feature to record notes played from the user-interface of **Synplant** or you may use it to chain several **Synplants** and trigger them simultaneously from a single window.

Selecting output channel **Off** will stop notes from playing entirely when you click to edit branches. This particular setting is therefore useful in the Audio Unit version as well as the VST version.

**Pitch Wheel**
Here you can choose the range of the pitch wheel in number of semitones.

**Velocity Curve**
This is a global velocity curve. It is different from **Velocity Sensitivity** control on the main interface in that it transforms all received MIDI notes according to one of three predefined curves. You typically use it to compensate for the velocity response of your keyboard or your particular playing style.

![Figure 7 Velocity Curves](image)

**Enable MIDI Program Changes**
Check this box to make **Synplant** respond to "MIDI program change messages". Please read the **Program Slots** section for more information.
Select Branches with MIDI Notes
If you uncheck this box, Synplant will not automatically select branches (for planting / cloning etc) when you play notes on your MIDI keyboard or from your sequencer. It may be useful to turn this off if you wish to edit your plant while you are playing a song in your sequencer.

Reset, Load, Save, Make Default
Use the Reset button to reset all MIDI configuration settings to default. Clicking this button will also reset any reassigned MIDI controllers. Use the Load... and Save... buttons to store or restore the entire MIDI configuration. Finally, the Make Default button makes the current configuration the default configuration that will be used every time you create a new instance of Synplant.

Program Slots
Both the VST and AU versions of Synplant feature a set of 16 internal "program slots". Each slot stores a patch and it is possible to instantly switch between them. When using the VST version you usually choose the program from a popup menu in your host application. You may also enable "MIDI program changes" using the MIDI Config Dialog and send program change messages to switch programs. (If you are using the AU version of Synplant, MIDI program changes are the only way to access the different slots.)

The first time you launch Synplant an initial selection of 16 factory patches will be stored in the slots. Whenever you load or modify a patch, it will be automatically reloaded to the same slot the next time you start Synplant. This concept allows you to use the memory slots as a list of favorite patches.

Evaluation
For evaluation purposes you are allowed to try Synplant without charge for a limited period of time. The total time of the trial is three weeks, but weeks are only counted when you actually launch and play with Synplant. For example, it is possible to try Synplant for up to a week right after installing it, then go on a long vacation and come back and you would still have two weeks left of the trial time.

When the trial period is over, your Synplant will wither and die and stop producing sound. The only way to bring it back to life is by registering your copy. In order to do so you need a personal registration code that can be purchased online from the Sonic Charge website. Please go to http://soniccharge.com for pricing and more information.
**Genome Mapping**

Here we offer a complete list of all the genes that make up Synplant's DNA. Please be aware that although you may find some of them similar to the controls commonly found in other synthesizers, Synplant genes should not be confused with traditional synthesizer parameters. Many genes have a fairly complex relationship with each other and their scales and response ranges have been extensively tuned so that useful sounds can be created out of random "mutations".

For example, the "sample-and-hold" effect on Oscillator B (the b_sh gene) can introduce a lo-fi "decimated" sound. Whilst it can be very cool for special effects, it may not be something that you would want on the majority of your patches. Therefore, the b_sh gene response is tuned so that it will only activate the sample-and-hold effect at extremely high settings.

Furthermore, the range of all gene settings is from 0.0 to 1.0, even when the underlying parameters that they control may be considered "bipolar". For example, the a_mod gene which controls the pitch envelope amount. At 0.5 it is without effect, while at 0.0 it is maximum negative effect and at 1.0 it is maximum positive effect.

Finally, keep in mind that you can only edit the base genome of the seed. The further a branch is grown from the seed, the more it will mutate and differentiate itself from the seed. There is no way to control the exact changes in sound that take place when a particular branch grows. This is something that you will just have to leave to chance.

<table>
<thead>
<tr>
<th>Gene</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>env_time</td>
<td>Controls the total duration of the sound. Closer to 1.0 the sound will have an infinite duration, stopped only by releasing the key.</td>
</tr>
<tr>
<td>env_loop</td>
<td>Controls the looping time of the Envelope. A longer loop time than env_time means no looping will occur.</td>
</tr>
<tr>
<td>env_tilt</td>
<td>Decides the tilt of the Envelope. Smaller values mean quicker attack and longer decay, whilst higher values mean slower attack and faster decay. (The same envelope is used both for modulation and volume.)</td>
</tr>
<tr>
<td>vol_atk</td>
<td>Shapes the attack phase of the volume envelope. A value of 0.5 gives a linear attack. Smaller values give a slower build up, whilst higher values are quicker. (See Figure 9 Envelope Segment Shapes.)</td>
</tr>
<tr>
<td>vol_dcy</td>
<td>Shapes the decay phase of the volume envelope. A value of 0.5 gives a linear decay. Smaller values give a quicker drop whilst higher values are slower. (See Figure 9 Envelope Segment Shapes.)</td>
</tr>
<tr>
<td>vol_sus</td>
<td>Sets the sustain level of the sound. A value under 0.5 means no sustain. Higher values equate to greater sustain levels. (At 1.0, the decay phase of the volume envelope will not be heard at all.)</td>
</tr>
<tr>
<td>mod_atk</td>
<td>Shapes the attack phase of the modulation envelope. A value of 0.5 gives a linear attack. Smaller values give a slower build up, whereas higher values are quicker. (See Figure 9 Envelope Segment Shapes.)</td>
</tr>
<tr>
<td>mod_dcy</td>
<td>Shapes the decay phase of the modulation envelope. A value of 0.5 gives a linear decay. Smaller values give a quicker drop and as expected higher values are slower. (See Figure 9 Envelope Segment Shapes.)</td>
</tr>
<tr>
<td>mod_sh</td>
<td>Sets the sample-and-hold frequency of the modulation envelope. Only very high values will activate the effect and the higher the value, the slower the sample-and-hold rate.</td>
</tr>
<tr>
<td>mod_vel</td>
<td>Determines how velocity affects the modulation envelope. Lower settings lower the sensitivity and at 0.0, velocity will not affect modulation at all.</td>
</tr>
<tr>
<td>Gene</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>lfo_rate</td>
<td>Designates the LFO frequency. The LFO creates vibrato and tremolo effects.</td>
</tr>
<tr>
<td>lfo_amt</td>
<td>Adjusts the level of the vibrato / tremolo effect. Values less than 0.5 will turn off the LFO entirely.</td>
</tr>
<tr>
<td>lfo_bal</td>
<td>Decides the balance between vibrato (<em>pitch modulation</em>) and tremolo (<em>amplitude modulation</em>). 0.0 = vibrato, 0.5 = both vibrato and tremolo, 1.0 = tremolo only.</td>
</tr>
<tr>
<td>a_form</td>
<td>Controls the waveform shape and timbre of Oscillator A. The waveform morphs gradually from sine to sawtooth to square to pulse. (See Figure 11 Oscillator Waveforms.)</td>
</tr>
<tr>
<td>a_noise</td>
<td>Adjusts the mix of noise in Oscillator A. Higher settings will introduce noise and at 1.0 the signal is entirely obscured by noise.</td>
</tr>
<tr>
<td>a_color</td>
<td>Changes the character of the noise in Oscillator A from a brown (<em>muddy</em>) noise to a white (<em>sharp</em>) noise.</td>
</tr>
<tr>
<td>a_freq</td>
<td>Controls the pitch of Oscillator A. In practice, since Oscillator B and the filter cut-off frequencies are linked to this setting, it determines the overall pitch of the sound.</td>
</tr>
<tr>
<td>a_mod</td>
<td>Is bipolar and determines the pitch modulation amount from the Envelope. 0.5 means no pitch modulation. 0.0 is maximum negative and 1.0 is maximum positive modulation.</td>
</tr>
<tr>
<td>b_form</td>
<td>Controls the waveform shape and timbre of Oscillator B. The waveform morphs gradually from sine to sawtooth to square to pulse. (See Figure 11 Oscillator Waveforms.)</td>
</tr>
<tr>
<td>b_noise</td>
<td>Adjusts the mix of noise in Oscillator B. Higher settings will introduce noise and at 1.0 the signal is entirely obscured by noise.</td>
</tr>
<tr>
<td>b_freq</td>
<td>Controls the pitch of Oscillator B in relation to the pitch of Oscillator A.</td>
</tr>
<tr>
<td>b_mod</td>
<td>Is bipolar and determines the pitch modulation amount from the Envelope. 0.5 means no pitch modulation. 0.0 is maximum negative and 1.0 is maximum positive modulation.</td>
</tr>
<tr>
<td>b_sh</td>
<td>Sets the sample-and-hold frequency of Oscillator B. Only very high values will activate the effect and the higher the value, the lower the sample-and-hold frequency.</td>
</tr>
<tr>
<td>fm_amt</td>
<td>Controls the frequency modulation amount of Oscillator A by Oscillator B. The setting is bipolar with 0.5 meaning no frequency modulation.</td>
</tr>
<tr>
<td>fm_mod</td>
<td>Changes how the Envelope affects the frequency modulation amount. At 0.5 it has no effect on the fm amount. Lower values increase the fm amount as the modulation envelope increases and higher values do the opposite.</td>
</tr>
<tr>
<td>sub_am</td>
<td>Adjusts the Sub-Oscillator mix. The Sub-Oscillator Amplitude modulates Oscillator B with a pitch that is one octave lower.</td>
</tr>
<tr>
<td>balance</td>
<td>Changes the mix-balance between Oscillator A and B. At 0.0 you will only hear Oscillator A and at 1.0 only Oscillator B.</td>
</tr>
<tr>
<td>ftt_freq</td>
<td>Controls the cut-off frequency of the parallel filters in relation to the frequency of Oscillator A.</td>
</tr>
<tr>
<td>ftt_mod</td>
<td>Is bipolar and determines the cut-off modulation amount from the Envelope. 0.5 means no modulation. 0.0 is maximum negative and 1.0 is maximum positive modulation.</td>
</tr>
<tr>
<td>ftt_sep</td>
<td>Sets the separation amount between the cut-off frequencies of the two parallel filters. At 0.5 there is no separation and the filters act in unity as a single filter.</td>
</tr>
<tr>
<td>ftt_q</td>
<td>Controls the “q value” (or “resonance”) of the filters.</td>
</tr>
<tr>
<td>ftt_kf</td>
<td>Determines how filter cut-off changes over the keyboard. Below 0.25 there will be no change at all and the cut-off stays fixed. Above 0.75 the cut-off frequency will follow the keyboard exactly.</td>
</tr>
<tr>
<td>fx_mix</td>
<td>Sets the initial dry / wet mix of the built in effect (a chorusing reverb). (The mix can be further adjusted with the Effect slider on the main page.)</td>
</tr>
<tr>
<td>fx_len</td>
<td>Changes the length of the reverberation.</td>
</tr>
<tr>
<td>fx_damp</td>
<td>Controls how higher frequencies are dampened when the reverb decays. Higher settings mean more dampening.</td>
</tr>
<tr>
<td>fx_chors</td>
<td>Adjusts the chorus amount. Higher settings introduce a chorus / unison effect to the sound.</td>
</tr>
<tr>
<td>fx_size</td>
<td>Changes the size of the perceived reverberation space. Note that this gene does not change when growing branches because it would cause disruption of the audio.</td>
</tr>
</tbody>
</table>
Voice Anatomy

Figure 8 shows the various components that comprise Synplant's Envelope. Please note that there is only one envelope per voice which controls both volume and "modulation" effects. However, the exact curves or "shapes" of the envelope segments are set independently for the attack and decay phases of the volume and modulation targets respectively.

Figure 9 displays a few examples of envelope segment shapes. (The percentages are mainly there for illustration purposes. They do not correspond exactly to the gene settings.)

Figure 10 (next page) reveals the low-level wiring of a voice inside Synplant. Blue lines and boxes represent the flow of the "control signals". Gray lines and boxes represent the "audio signal" path. Triangles are "gain stages" or multiplications. The diagonally slashed circles symbolize cross-faders.

Finally, Figure 11 (next page) depicts a few different waveforms that may be produced by Oscillator A and B.
Figure 10  Synplant Voice Architecture

Figure 11  Oscillator Waveforms
Default MIDI Controller Assignments

The following table shows which MIDI controller numbers are mapped to which parameters by default. You can reassign the controller numbers by choosing Reassign MIDI Controllers from the Main Menu.

<table>
<thead>
<tr>
<th>Controller #</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mod Wheel</td>
</tr>
<tr>
<td>7</td>
<td>Volume</td>
</tr>
<tr>
<td>16</td>
<td>Rotation</td>
</tr>
<tr>
<td>17</td>
<td>Tuning</td>
</tr>
<tr>
<td>18</td>
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System Requirements

The minimum requirements for installing and running Synplant under Microsoft Windows are:

- Microsoft Windows XP or later
- A host application that supports 32-/64-bit VST 2.4 plug-ins
- 2GHz Pentium IV or equivalent
- 30MB of free disk space

The minimum requirements for installing and running Synplant under Mac OS X are:

- Mac OS X 10.6 (Snow Leopard) or later
- A host application that supports 32-/64-bit VST 2.4 or AudioUnit 2 plug-ins
- 1.83GHz Intel Core Duo or better
- 60MB of free disk space
Change History

Version 1.2.1 (2014-12-16)
• Open browsers now feature two buttons to quickly take you to factory and user preset directories.
• Many minor bug-fixes.

Version 1.2 (2014-03-26)
• 64-bit compatible version.
• Supports Sonic Charge Authenticator for easier registration.
• Compiled with latest compilers, frameworks and libraries for improved stability and compatibility.
• New installers (signed on Mac)
• Moved documentation and factory patch location on Windows from DLL directory to \Program Files\Sonic Charge
• Name of DLL (Windows) and "bundle" (Mac) changed from SynplantVST/SynplantAU to Synplant.

Version 1.0.1 (2009-09-24)
• Implemented support for the "all notes off midi message". We have discovered that some hosts (most importantly Cakewalk Sonar) requires this to stop notes from playing. In other words, the hanging note problems in Sonar should have been fixed now.
• Improved compatibility with older VST 2.3 hosts, including FXpansion's RTAS wrapper. VST 2.4 is still the official requirement, simply because we need to put a limit on the extent of our guarantees. However, we will continue doing our best to provide "unofficial support" for as many hosts as we possibly can. In short, we expect this version of Synplant to work well with the RTAS wrapper.
• Fixed a rare but serious problem with the GUI freezing up on Mac (never to defrost again, never to come back to life). Turned out to be a bug in Synplant in combination with some unexpected behavior from OS X.
• Some minor updates to the internal code libraries that will improve stability in general.
Credits and Contacts

Sonic Charge Synplant v1.0 - v1.2 (2008 - 2014)

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NuXPixels, PikaScript & AU/VST Symbiosis by NuEdge Development
AngelCode BMFont by A. Jönsson
LibPNG by G. Randers-Pehrson + others
VST Plugin Technology by Steinberg
Audio Units SDK by Apple

Sonic Charge website:
http://soniccharge.com

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