

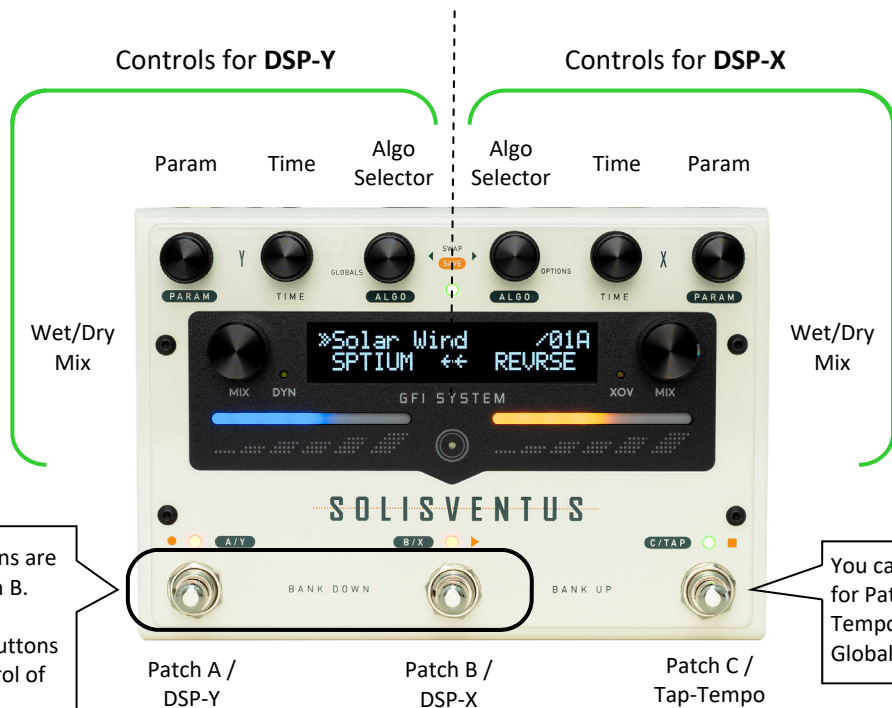


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Other documentation available for Solis Ventus (www.gfisystem.com/download-solis-ventus)

- Algorithm Reference
- MIDI Implementation Chart

1.1 User Interface: Overview



In **Preset Mode** these buttons are used to call Patch A or Patch B.

In **StompBox Mode** these buttons are used for individual control of DSP-Y and DSP-X.

You can configure this button for Patch C call or for Tap Tempo. This is done in the Global Settings menu.

Algorithms are selected using this knob.

These two knobs control 3 parameters that are **common** to all algorithms:

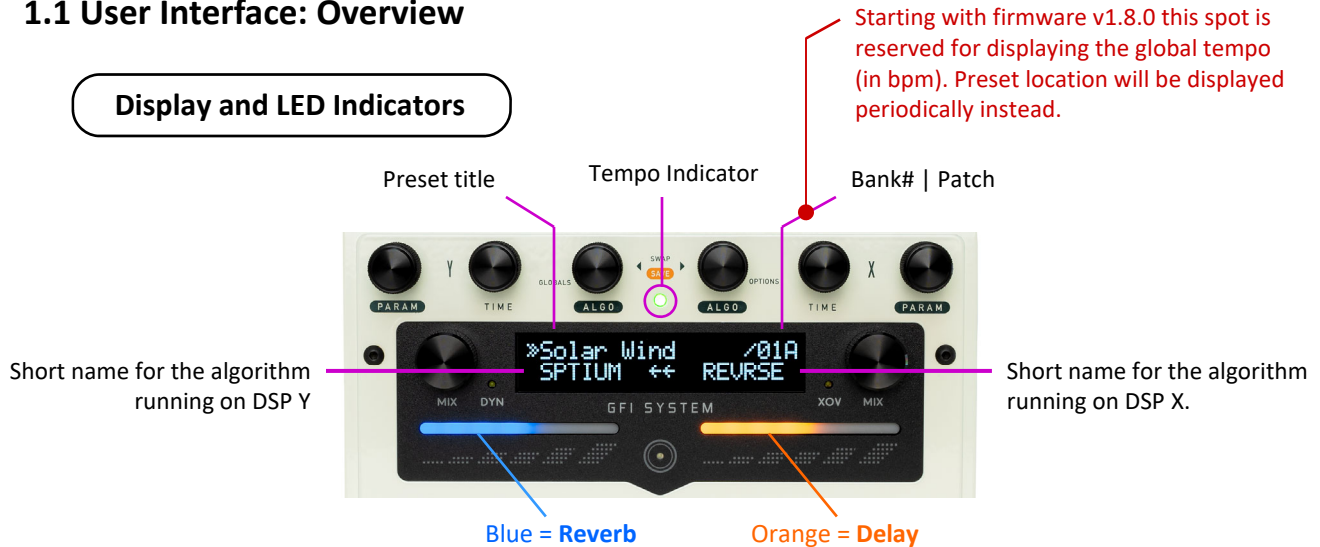
- TIME : *Delay Time* (for delay) or *Predelay* (for reverb).
- WET : effects signal level.
- DRY : clean, unprocessed signal level.



Each algorithm has up to 8 unique parameters that are adjusted using the PARAM knob

1.1 User Interface: Overview

Display and LED Indicators



Dynamics LED indicator lights up when Dynamics X and(or) Dynamics Y are active.

Crossover LED indicator lights up when Crossover is active.



In both **Preset Mode** and **Stompbox Mode**, this LED indicator is on at all times, and the color is **GREEN**, this serves as a constant reminder that footswitch C/Tap is working as a Tap Tempo switch.

Footswitch C/Tap is configured for Tap Tempo



In **Preset Mode** (default), these LED indicators turn on when the respective patch is active, and the color is **ORANGE**.

In **Stompbox Mode**, these LED indicators turn on when the respective DSP engine is active, and the color is **RED**.

In **Preset Mode** (default), this LED indicator turn on when the patch C is active, and the color is **ORANGE**.

In **Stompbox Mode**, this LED indicator will be off at all times.

Footswitch C/Tap is configured for Patch C.

1.1 User Interface: Controls

ALGO Selector knob - Scroll through the algorithm list.



The algorithm selector knob is also a button:

- Tap the button to toggle between Delay and Reverb.
- (DSP X algo selector): Hold for 2 seconds to enter the Options menu.
- (DSP Y algo selector): Hold for 2 seconds to enter the Global Setting menu.
- (DSP X + DSP Y): Hold both buttons for 2 seconds to enter the Preset Save menu.
- (DSP X + DSP Y): Tap both buttons simultaneously to swap the X and Y algorithms.

TIME knob - Set the Delay Time (for Delay algorithm), or the Predelay parameter (for reverb algorithm).



The TIME knob is also a button:

- Tap the knob's button to enter the Time Options menu.
- Twist (hold and turn) to set the Time in 1 milisecond (or 1 BPM) step.

PARAM knob



Each algorithm has 8 unique parameters. These parameters are controlled using a single knob, the PARAM knob.

The PARAM knob is also a button:

- Use the combination of knob turns and button presses to navigate the menu and adjust the parameter values.

MIX knob - Turn the knob to set the Wet signal level or the Dry signal level.



The Dry signal level can be adjusted independently of the Wet signal level, this provides a highly flexible control over the Wet/Dry mix.

The MIX knob is also a button:

- Tap the button to toggle between Wet Level control and Dry Level control.
- (DSP X): Hold for 2 seconds to toggle DSP X on and off.
- (DSP Y): Hold for 2 seconds to toggle DSP Y on and off.

1.1 User Interface: Controls

Touch Sliders

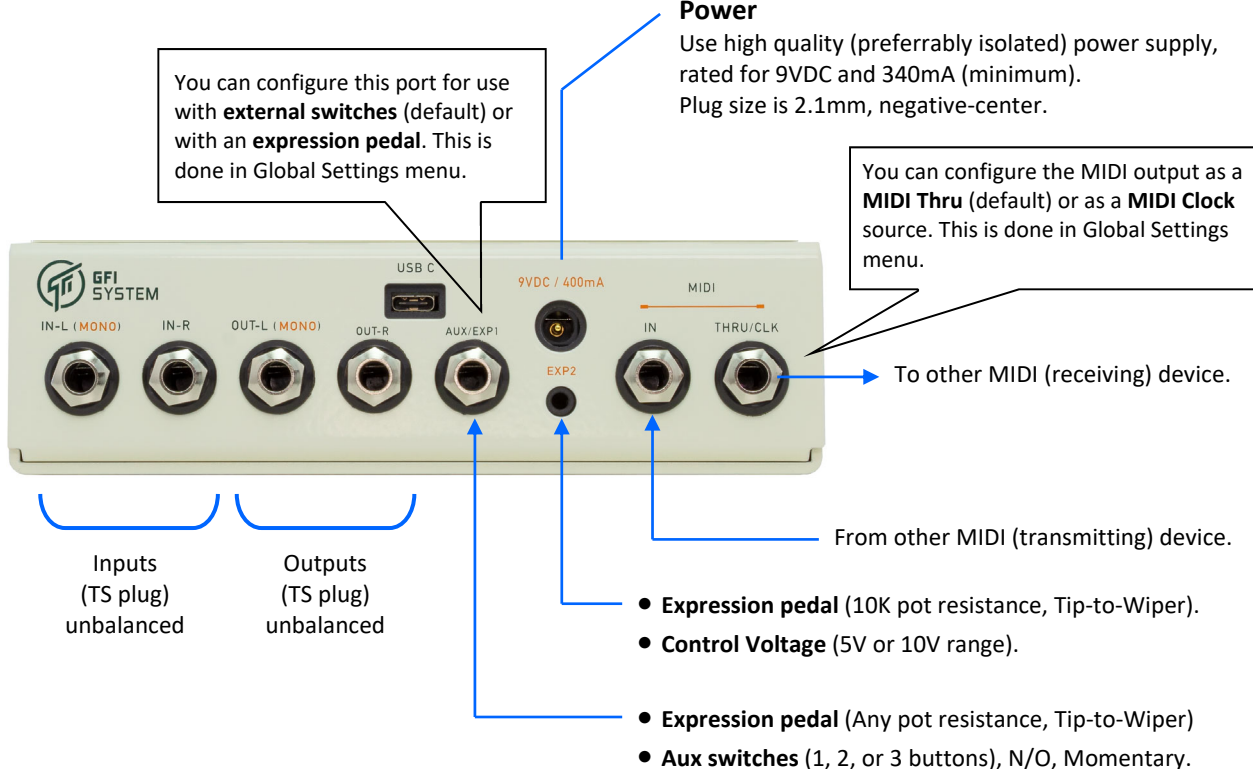


The touch slider duplicates the functionality of the MIX knob, i.e. it controls the Wet and Dry signal levels. You can use the MIX knobs or the touch sliders interchangeably.

Additionally, the touch sliders have other functions that are used in the Cross-over and Dynamics selection menu (page 11).

*** The touch sliders work best with gentle touch.**

I/O and Interconnects



Mono input - Stereo output

When only mono input is available, stereo output may be obtained by feeding the input into the Left input (IN-L) port.



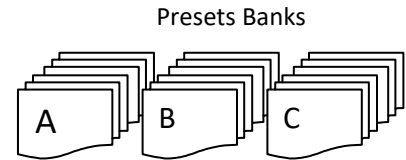
Output Summing

When only one output is used, the Left and Right output signals are not automatically summed to mono. If you wish to sum the outputs to mono you can enable the sum-to-mono feature in the Global Setting menu.

1.2. Preset Mode vs Stompbox Mode

Solis Ventus can operate in two different modes: Preset Mode and Stompbox Mode. In the Preset Mode, the footswitches are used to call the patches (A, B, or C), while in Stompbox Mode footswitch A/Y and footswitch B/X are used to activate or deactivate DSP Y and DSP X respectively, just like using two individual stompboxes.

Preset Mode



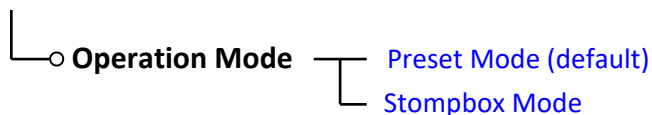
Stompbox Mode



These two modes are not strictly exclusive, i.e **choosing one over the other will not lock you out of any functionalities or features, they just offer different priorities**. For example, in Preset Mode the priority is to be able to call presets easily and quickly, but you can also activate/deactivate the DSPs individually, it's just not as easy (hold the Mix button for 2 seconds). Like wise, in Stompbox Mode the priority is to be able to activate/deactivate the individual engines quickly, but you can still switch to another presets by invoking 'bank-change' operation (pressing two footswitch simultaneously).

Operational mode configuration is set in the Global Settings menu:

Globals



Tips & Tricks: Get the best of both worlds! Configure the pedal to operate in Stompbox Mode and use either an Aux switch or MIDI controller for seamless preset change.

1.3. Preset System

Up to 96 presets can be saved and recalled using the onboard footswitches, an external switchbox, or MIDI. The presets are arranged organized into 32 banks, where each banks contains 3 patches: Patch A, Patch B, and Patch C. The pedal ships with the first 24 preset locations programmed with factory presets. Users can overwrite these with their own presets if so they wish. The remaining preset locations are not pre-programmed with anything meaningful, and may be regarded as 'empty presets'.

◆ Saving a preset

1. Press and hold ALGO X knob and ALGO Y knob together, release when the preset save menu is displayed on the screen.
2. Turn the ALGO X knob or ALGO Y knob to choose the desired preset bank, then push footswitch
 - **A/Y** to save to patch A in the selected bank.
 - **B/X** to save to patch B in the selected bank.
 - **C/TAP** to save to patch C in the selected bank.
 This one is only applicable if footswitch C has not been configured for Tap Tempo.



After saving the preset, you can edit the preset title from the Options menu:

Options

○ Preset Title editor

◆ Copying a preset to another location

1. Call the preset that you want to copy to another location.
2. Execute the preset-save procedure described above, remember to choose the desired destination location first before committing the save!

◆ Scrolling through the preset banks

To scroll up: short press footswitch B/X and footswitch C/TAP together.

To scroll down: short press footswitch A/Y and footswitch B/X together.

Tips: execute the double-switch presses described above at least once, then you can use the ALGO X knob or ALGO Y knob for faster scrolling.

◆ Putting constraints to the accessible preset banks

Sometimes you only need to use a few banks of presets, and would love to be able to navigate through them without having to tip toe around the other unused oness. You can achieve this by restricting the accessible preset location to only a few consecutive banks. This is done in Global Settings menu:

Globals

○ **Preset Banks** — For example, if you choose 'Bank 4', then the bank-change cycle is like this:
[Bank 2 to Bank 32]



This self-imposed restriction will not be applied when a preset is called via MIDI. PC messages will always be able to call any preset number.

1.4. Tempo Controls and Options



◆ Tempo Mode

- **Free** - tempo is freely set using the TIME knob. Tempo will not be affected by tap-tempo, Midi Clock, or the tempo set on the other DSP.
- **Synced/Global** - Tempo is locked to the Global tempo, which is set via tap-tempo, Midi Clock, or the tempo set on the other DSP (if it's also set to Synced).

DSP Y	DSP X	Tempo Behavior
Free	Free	X and Y will run on their own tempo independently.
Free	Synced	Y will run on its own tempo, X will follow global tempo.
Synced	Free	X will run on its own tempo, Y will follow global tempo.
Synced	Synced	X and Y will lock on to global tempo.



“f” Indicates tempo is currently set to ‘Free’



“Bell” Indicates tempo is currently set to ‘Synced’

◆ Tempo Subdivision

- 1/16 note
- 1/8 note triplet
- 1/8 note
- 1/4 note triplet
- Golden Ratio
- Dotted 1/8 note
- 1/4 note
- 1/2 note triplet
- Dotted 1/4 note
- 1/2 note

◆ Tempo Display

- **MS** - tempo is displayed in milisecond.
- **BPM** - tempo is displayed in beats-per-minute (BPM).

◆ Tempo Change

- **Instant** - tempo change is instant and silent.
- **Warped** - tempo change is swept and creates a pitch warping effect.

◆ **Global Tempo** < added in firmware v1.7.16 >

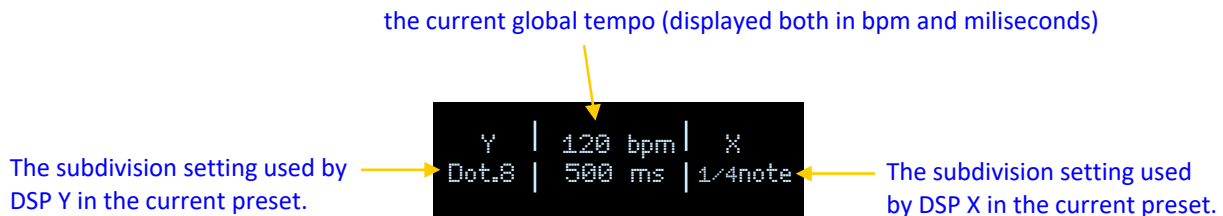
This is not actually an option - rather, a function for saving the *current* global tempo into the pedal's memory. The tempo will be loaded up at every power up, and used as the initial global tempo.

◆ **Tap Tempo**

This is not actually an option - rather, a function for tapping in the desired tempo on the knob (instead of the tap tempo footswitch, which may have been configured for other uses).

About Tap-Tempo information display

When you tap on the tap tempo footswitch. The screen will show the following display:



< added in firmware v1.7.16 >

If, let's say, DSP X tempo mode is configured as 'Free/Preset' (does not follow global tempo), then the preset tempo is displayed instead of the subdivision setting as follows:



Maximum Delay Time

Starting with **firmware 1.8.0** we introduced a "Memory Allocation" setting, which enables users to allocate more audio memory to get longer delay times, at the expense of Looper time.

There are 3 selectable settings:

- 2.2 seconds max delay time - 40 seconds looper time (default).
- 4.4 seconds max delay time - 26 seconds looper time.
- 8.6 seconds max delay time - 0 seconds looper time (looper is disabled).



This setting is specified on per-preset-basis. The factory default is 2.2 seconds max delay time for all presets.



If your pedal is running on an older firmware version the maximum delay time is fixed at 2.2 seconds.

1.5. Auto-Ramping < added in firmware v1.2.0 >

Auto ramping feature allows you to apply automated ramping to a parameter from the current value to its maximum value. It's a great way to add spontaneous expressiveness without resorting to an outboard expression pedal. Auto-ramping may be mapped to one of the eight parameters that are unique to each algorithms.

◆ Mapping a parameter to auto-ramping

1. Select the parameter that you'd like to map to auto-ramping.
2. Hold down the PARAM knob button for about two seconds.
Release when the '/' symbol appears next to the parameter's label.
That symbol serves as an indication that the parameter is currently mapped to the auto-ramping function.

```

■ Decay      50
▶ Early Energy 77
  
```

```

■ Decay      50
▶ /Early Energy 77
  
```



Unmapping

The same 2-step procedure above is also used to unmap a parameter from auto-ramping.

◆ Using the auto-ramping function

Hold down either footswitch **A/Y** or footswitch **B/X**,
after about one second the auto-ramping function is triggered.

The mapped parameter value will be ramped from the current value up to its maximum value, and will remain there for as long as the footswitch is held down. When the footswitch is released the parameter value will be ramped down back to its original value.

◆ Auto-ramp function via external control

Auto ramping can also be triggered via Aux switches or MIDI. One advantage when using external control devices is that the '*one second hold wait*' is no longer necessary, the ramping is immediately triggered the moment the switch is pressed.

With MIDI, you don't even have to keep your foot on the footswitch, the parameter value will stay at its maximum value until you send the 'auto-ramp release' command.

Tips & Tricks: 'Hold/Freeze' function can be realized by mapping the REPEATS parameter (for delay) or DECAF parameter (for reverb) to the auto-ramp function. The same technique can also be applied to the Analog delay or Tape delay algorithms to trigger their self-oscillations.

1.6. Miscellaneous Features/Functions

◆ XY Swap

This feature allows you to quickly swap the algorithms (along with the parameters and on/off state) on the X and Y engines. It comes in really handy when you are in the process of creating a sound that involves stacking of two effects, and would like to hear how the two effects sounds like when the order is swapped.



◆ Initiating Audio Capture for Infinity Reverb algorithm

< added in firmware v1.7.1 >

This function is applicable only when using the Infinity Reverb algorithm.

The Infinity Reverb algorithm allows you to capture a brief snapshot of the sound that you are playing, and loop it indefinitely, and then you can play over it. A special footswitch operation is reserved for initiating the audio capture process:



- after 1 second of holding audio capture is initiated.



- algorithm begins to continuously capture a snapshot of whatever you are playing.

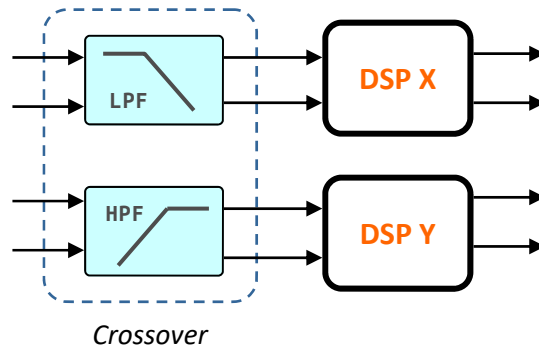


- algorithm will take the last 0.25 seconds of the captured sound and loop it indefinitely, creating an infinitely sustained sound.

2. Crossover Filters

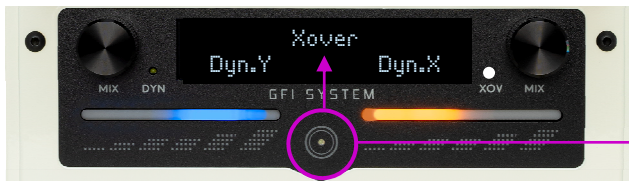
A crossover filter which splits the input signal into two frequency band (lowpass and highpass) can be used to pre-process the input signal before feeding it into the Delay/Reverb engines. One frequency band is routed to DSP X and the other band is routed to DSP Y.

This frequency band splitting allows the DSPs to run the algorithms on different frequency bands, creating unique 'moods' and textures. The crossover frequency is adjustable from 400 Hz to 2500 Hz.



"XOV" LED indicator lights up when Crossover is active.

Tap the touch button to bring up the Crossover/Dynamics selection scene.



Tap the touch button again to select "Crossover".



Turn to scroll through the list of Crossover parameters.

Turn to scroll through the parameter values, Tap to exit the menu.

Tap to exit the menu

Menu structure:

- Crossover : < On / Off >
- Mapping : < H/L - HPF on Y, LPF on X
L/H - LPF on Y, HPF on X >
- Frequency : < 400 Hz to 2500 Hz >
- exit < exit and save >



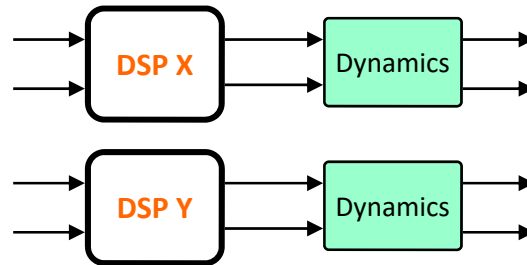
Saving changes: execute the preset save procedure (see section 1.3) to save changes to the current preset.

3. Dynamics Engine

When using delays and reverb effects it is sometimes desirable to be able to control the intensity of the effect dynamically, i.e. following your picking dynamics. For instance, to avoid heavy delay or reverbs from getting in the way of your playing a 'Ducking delay' or 'Ducking reverb' is often used. This type of delay/reverb *ducks* the effects level during busy phrases and turns it back up when the input signal ceases.

Another kind is 'Gated delay' or 'Gated reverb', where the effects level is gated out rather abruptly in the absence of signal.

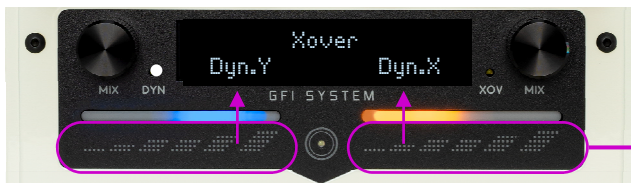
With Solis Ventus we took a more encompassing approach: instead of an individual Ducking delay/reverb or a Gated delay/reverb, we introduced an independent Dynamics engine, placed post DSP X and DSP Y. This allows dynamics effects (ducking or gating) to be applied to any delay or any reverb algorithms in the Solis Ventus.



"DYN" LED indicator lights up when Dynamics X or Dynamics Y is active.

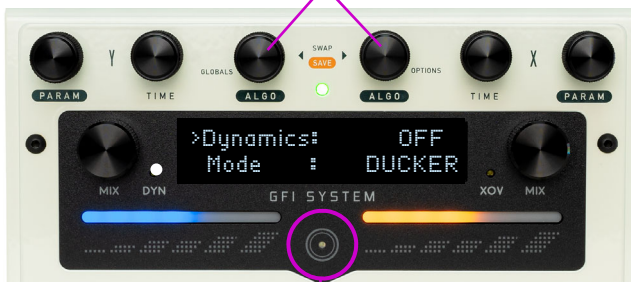


Tap the touch button to bring up the Crossover/Dynamics selection scene.



Tap the touch LEFT slider to select "Dynamics Y"
Tap the touch RIGHT slider to select "Dynamics X"

Use these knobs/buttons to navigate the menu

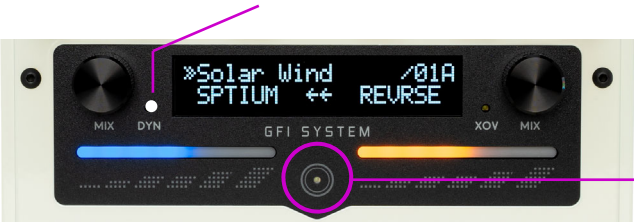


Tap to exit the menu

Menu structure:

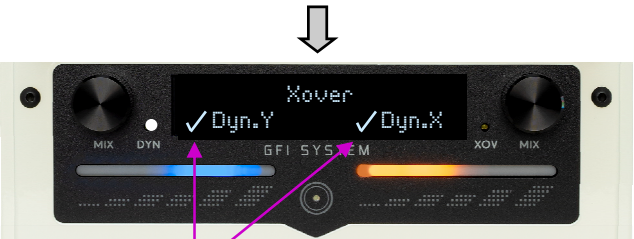
- Dynamics : < On / Off >
- Mode : < Ducker / Gate >
- Attack : < 1 ms to 30 ms >
- Release : < 100 ms to 620 ms >
- Threshold : < -10 dB to -44 dB >
- Intensity : < 0 % to 100 % >
- exit < exit and save >

As mentioned earlier the “DYN” LED indicator lights up either Dynamics X or Dynamics Y is active.

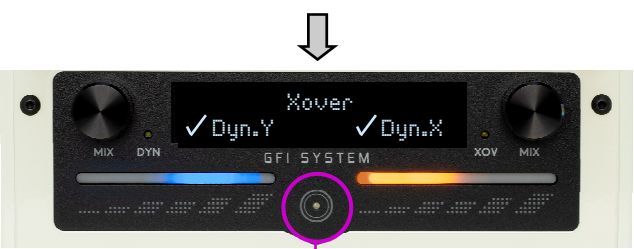


Hey! There is only one LED indicator, how can I tell which Dynamics engine is currently active?

Tap the touch button to bring up the Crossover/Dynamics selection scene.



A check mark next to 'Dyn.Y' indicates that Dynamics engine belonging to DSP Y is currently active. The same goes with the DSP X side.



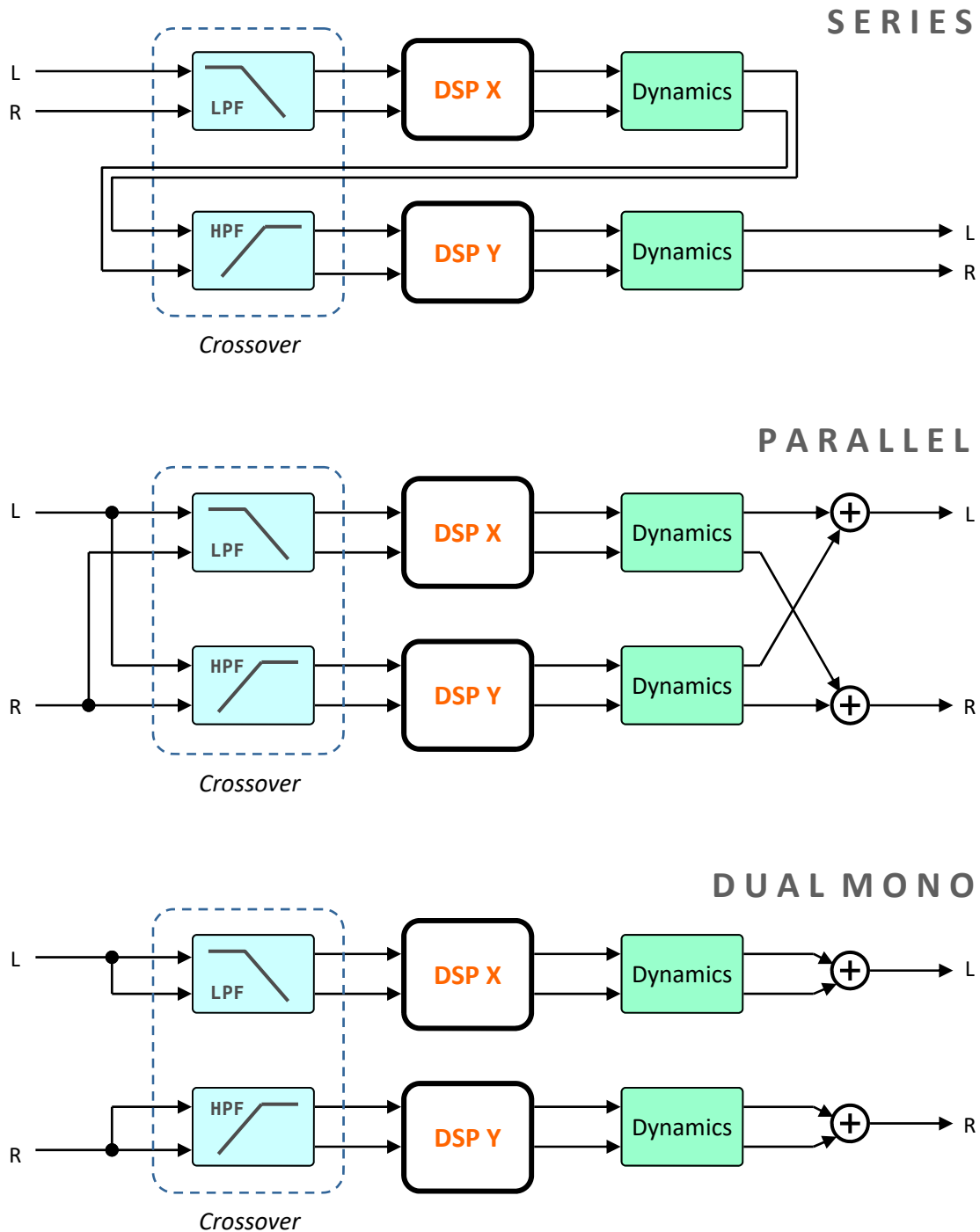
Tap twice to exit the menu



Saving changes: execute the preset save procedure (see section 1.3) to save changes to the current preset.

Putting all these together...

Now we will show you the overall arrangement of the processing blocks in the Solis Ventus:



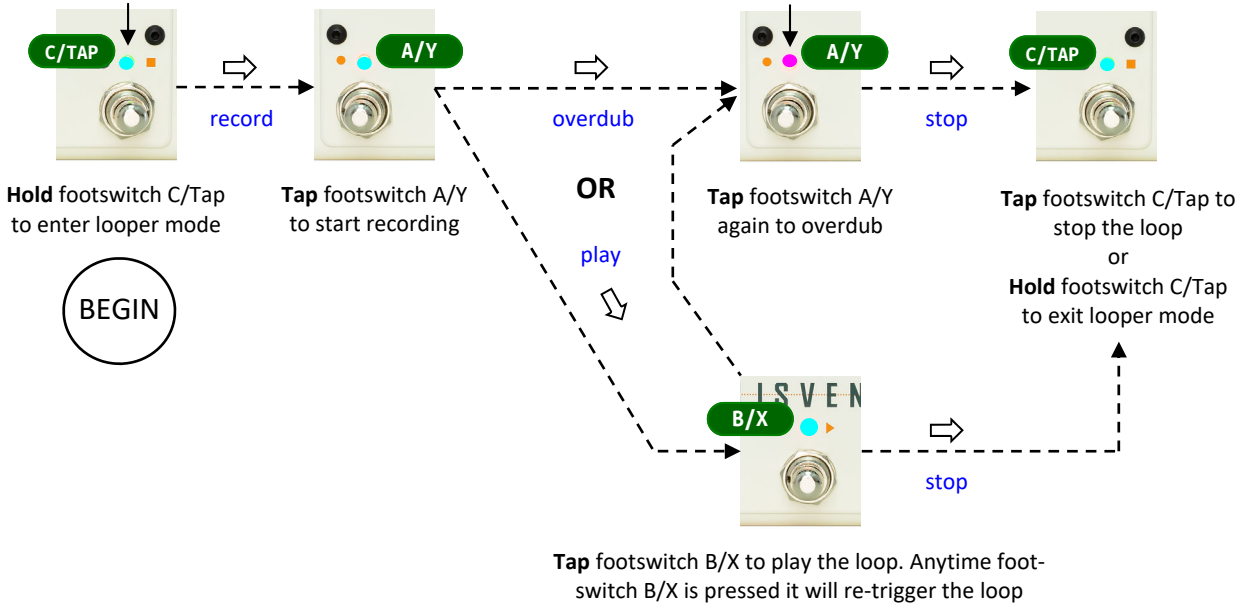
- Note:** 1. Crossover and Dynamics are optional and can be individually enabled or disabled.
 2. The Crossover filter mapping in the diagram above is not fixed. You can invert the mapping such that LPF is on DSP-Y path and HPF is on DSP-X path instead.

4. Looper

A stereo looper (up to 40 second) is available that works independently from the Delay and Reverb engines.

LED will turn **cyan** to indicate the looper mode is active

LED will turn **violet** to indicate the looper is overdubbing



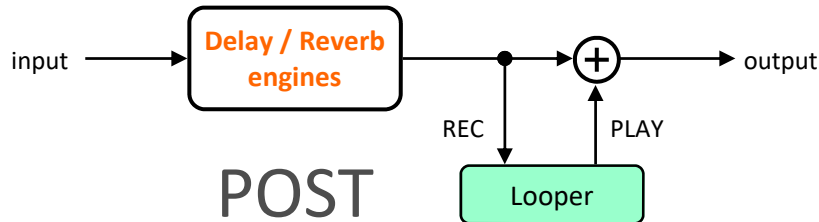
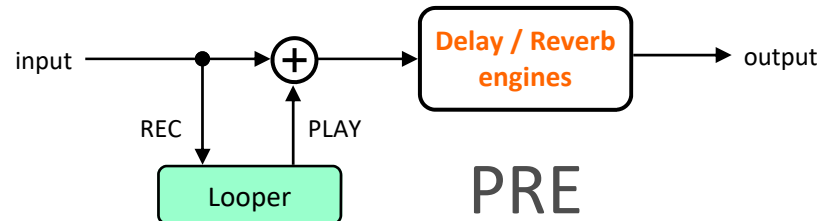
Overdubbing - once a loop track is recorded, each time you press the REC button (footswitch A/Y) a new layer will be overdubbed on top of the track. You can do this as many time as you like.

Erasing - if you'd like to start afresh with a blank slate the existing loop track must first be erased.



👉 The loop can be kept playing in the background if desired. Normally the loop will stop playing when exiting the looper mode. To keep playing the loop when exiting looper set the Looper Exit to PLAY in the Global Settings menu.

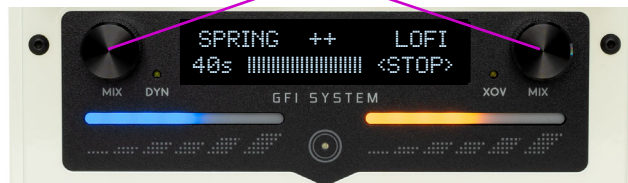
👉 Looper can be placed *before* (Pre) or *after* (Post) the delay and reverb engines. This configuration is set in Global settings menu.



Looper Effects

Playback effects such as “Double Speed” and “Reverse” can be added on the fly.

When Looper mode is active: Tap the button (either one) twice



2X SPEED

- Turn to select ON or OFF.
- Tap to confirm selection and exit the menu.



REVERSE

- Turn to select ON or OFF.
- Tap to confirm selection and exit the menu.

Tips and Tricks: Only “2X-Speed” effect is available, but you can easily create a “Half-Speed” effect:

1. Activate the 2X Speed effect.
2. Start recording.
3. Deactivate the 2X Speed effect - the loop you’ve just recorded will now play at half the speed.

👉 Recording a loop with 2X-Speed effect enabled halves the loop length limit to 20 seconds.

Ascend Dub

This is a special mode where loops are played and overdubbed in 2X speed, resulting in an ever increasing pitch transposition. Using this mode will usually result in a surprising sequences of sound, one that you may not expect, but most of the time is pleasing and even hypnotic. There is an element of unpredictability that hits you like a freight train, but it's a collision that takes things into interesting and uncharted waters! If you just want a standard looper, stay away from the Ascend Dub, but if you are into experimentation jump in and have some fun.

Here's a typical sequence:

1. Record a loop track - **press REC.**
2. Play the loop - **press PLAY.**
3. Enter Ascend Dub menu - **Hold PLAY button for 2 seconds.**
 > activate the Ascend Dub mode.

You will immediately hear the loop is now playing at 2x speed.

4. Overdub a new layer of sound.
5. Activate REVERSE effect if you wish.
6. Overdub some more layers if you wish.

Looper Time

Starting with **firmware 1.8.0** we introduced a "Memory Allocation" setting, which enables users to allocate more audio memory to get longer delay times, at the expense of Looper time.

There are 3 selectable settings:

- 2.2 seconds max delay time - 40 seconds looper time (default).
- 4.4 seconds max delay time - 26 seconds looper time.
- 8.6 seconds max delay time - 0 seconds looper time (looper is disabled).



This setting is specified on per-preset-basis. The factory default is 40 seconds max looper time for all presets.



If your pedal is running on an older firmware version the max ooper time is fixed at 40 seconds.

Limitation - the looper in the Solis Ventus has one limitation:

"Changing preset will stop looper playback and existing loop track will be erased".

This limitation may be removed with future updates. But we are not making any promises at this time.

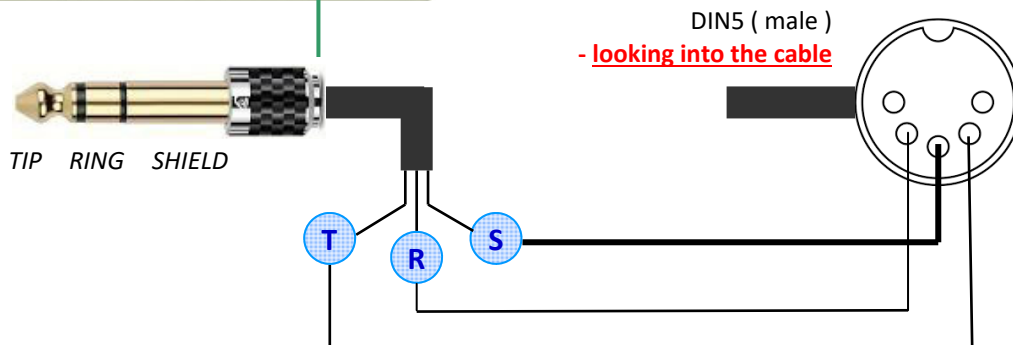
5. External Control

Solis Ventus provides several ways to control the pedal and access various features and functions remotely.



5.1 MIDI

You can use any standard MIDI controller capable of sending Program Change (PC), Control Change (CC) messages to remotely change presets or to control other functions or parameters in Solis Ventus. The MIDI input accepts **Type-A** TRS-to-DIN5 pin mapping:

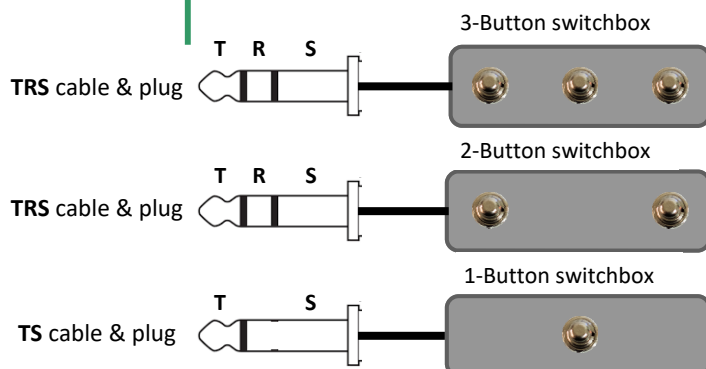


- Refer to the above pins mapping when ordering or making your own cable.
- Consult the “Midi Implementation Chart” document for PC/CC implementation details.



5.2 Aux Switches

External switches are absolutely wonderful and effective for unlocking the rich potential of user's control and access to the various features and functionalities. Aux switch configuration is done in the Global Settings menu (see page 25). Here are some of the functions you can assign to external switches:



Switches type:

- Normally-Opened,
- Momentary

- Bank Up
- Bank Down
- Next Patch
- Prev Patch
- Fave Preset
- Bypass / Engage
- Tap Tempo
- DSP X On/Off
- DSP Y On/Off
- Instant Auto-ramp

More switch functions may be added with future updates.



5.3 Expression & Control Voltage

Two separate expression inputs are available for use:

- EXP1 (1/4" jack).
- EXP2 (1/8" jack).

OR

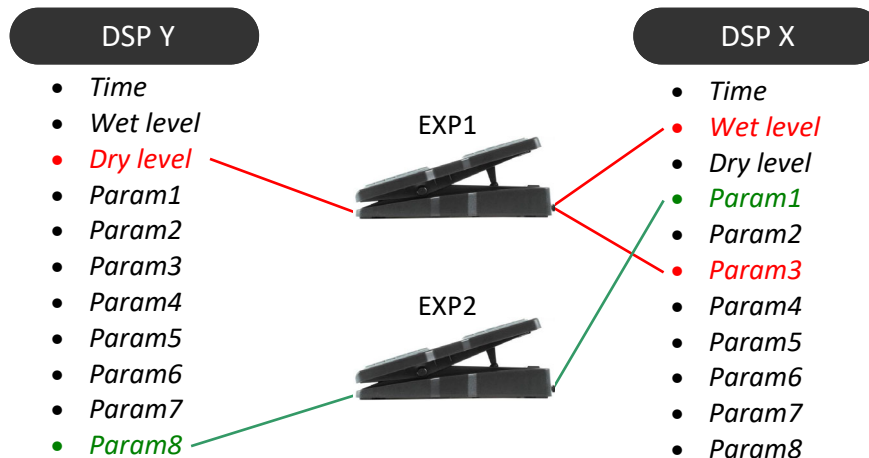


👉 EXP1 input is shared with Aux Switch input. User must configure the AUX/EXP1 input to be used for either Aux Switches or for Expression pedal, this is done in the Global Settings menu. EXP1 input is optimized for 10K pot resistance value, and Tip-to-Wiper polarity.

👉 EXP2 input can also accept Control Voltage (CV) sources, with switchable voltage range (5V/10V). When not in use it's recommended to disable EXP2 input to avoid spurious false sensing, this is done in the Global Settings menu. EXP2 input can accept any pot resistance value, and Tip-to-Wiper polarity.

◆ Expression Setup

Before using the expression, you will want to map at least one parameter to be controlled by the expression pedal. Up to two parameters of the algorithms running on DSP-X and DSP-Y can be simultaneously mapped to each expression. This is done in Options menu (see page 22)



Also, you may want to set the Heel and Toe value for each parameter assigned.



Heel value = parameter value when the expression is at Heel position (default is 0%)



Toe value = parameter value when the expression is at Toe position (default is 100%)

Enter the Options menu, navigate to one of the four setup pages:

Options

- Exp1 → X Setup
- Exp1 → Y Setup
- Exp2 → X Setup
- Exp2 → Y Setup

Use these knobs to navigate the menu.
Tap the buttons to save and exit.



Menu structure:

- Assign1 < 1st parameter assigned to expression, set to N/A to disable assignment >
- Heel value < set the Heel value for 1st assigned parameter >
- Toe Value < set the Toe value for 1st assigned parameter >

- Assign2 < 2nd parameter assigned to expression, set to N/A to disable assignment >
- Heel value < set the Heel value for 2nd assigned parameter >
- Toe Value < set the Toe value for 2nd assigned parameter >

- exit < exit and save >

6. Options

The Options menu brings up a variety of settings that are saved on per-preset basis. These include:

- XY Routing
- Volume Trim
- Bypass Trails
- Spillover
- DSP-X Trails
- DSP-Y Trails
- Input Pad
- Memory Allocation.
- PC Call State.
- Preset Titles.
- Expression setups.

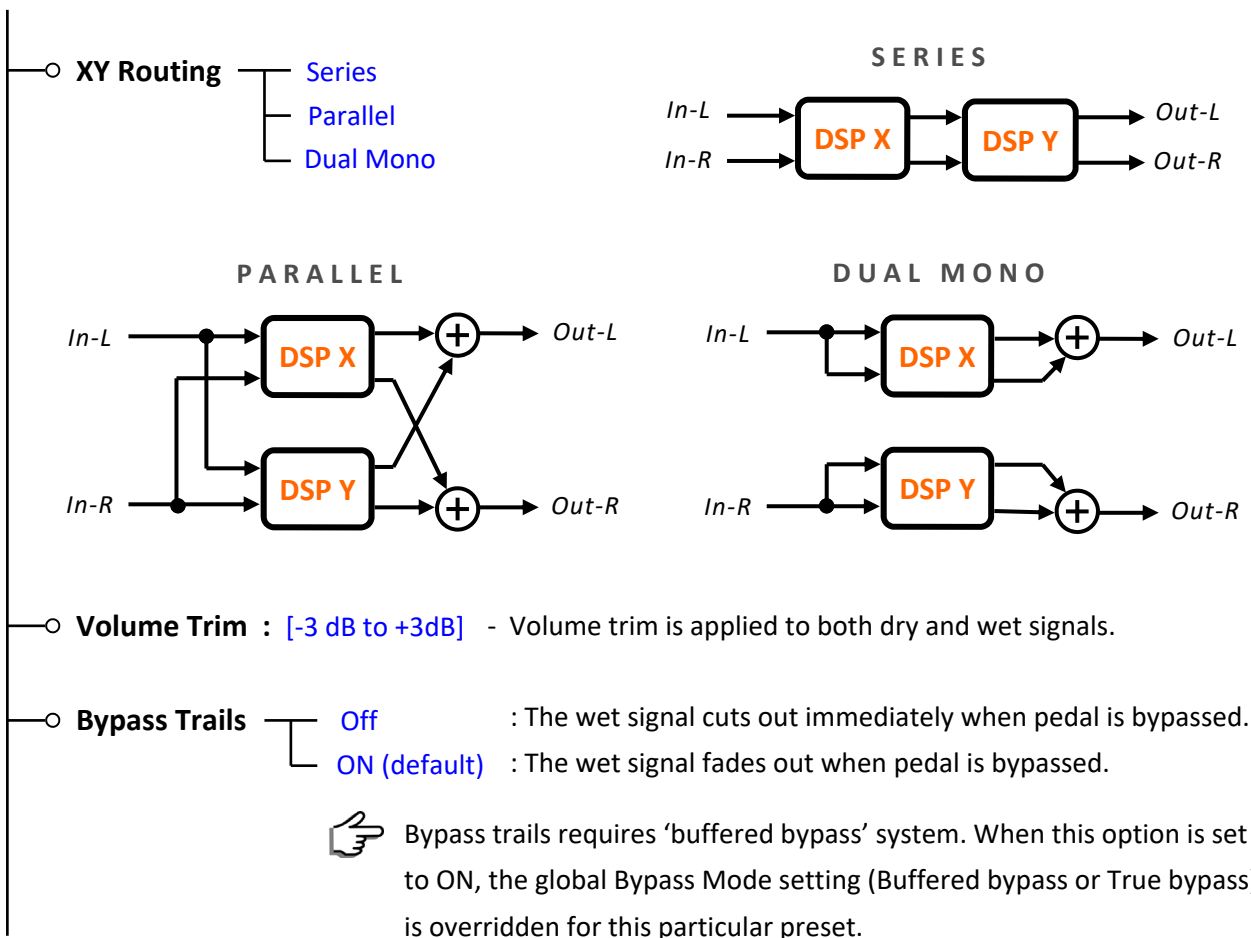
To enter the Options menu: **HOLD for 2 secs**



 **Saving changes** - changes are automatically saved to the current preset when exiting the menu by pressing DONE.

 **Exit without saving changes** - you exit the menu at anytime without saving any changes by holding the same button again for 2 seconds.

Options



Options

- **Spillover**
 - Off : No spillover when switching from this preset to another.
 - 0.5s : Spillover is capped to 0.5 seconds.
 - 1.0s : Spillover is capped to 1 seconds.
 - 2.0s : Spillover is capped to 2 seconds.
 - 4.0s : Spillover is capped to 4 seconds.
 - 8.0s : Spillover is capped to 8 seconds (default).
 - 16.0s : Spillover is capped to 16 seconds.
 - Inf. : Spillover time is unbounded.

This option **DOES NOT** set the actual spillover time, rather, it sets the maximum length of time the tails from previous preset may spillover into the new preset sound. For example, if you are switching from a preset that was running a reverb with over 20 second decay, then setting the spillover option value to 8.0s will reshape the tail such that it decays out in 8 seconds instead. On the other hand, if the reverb was set for < 4 second decay, the tail will simply decay out after 4 seconds.

This spillover time control is useful in situations where you use a delay or reverb with a very long repeats or decay setting in a song, but do not want that endless tail to last for so long during preset/song change.

- **DSP X Trails**
 - Off : The wet signal cuts out immediately when DSP X is bypassed.
 - On (default) : The wet signal fades out when DSP X is bypassed.
- **DSP Y Trails**
 - Off : The wet signal cuts out immediately when DSP Y is bypassed.
 - On (default) : The wet signal fades out when DSP Y is bypassed.

- **Input Pad** : [0 dB to -9dB] - Input signal attenuation.

< added in firmware v1.6.0 >

- **Memory Allocation**
 - Delay 2.2s / Looper 40s (default)
 - Delay 4.4s / Looper 26s
 - Delay 8.6s / Looper 0s - disabled.

< added in firmware v1.8.0 >

Memory allocation options gives you the flexibility to make a trade off between delay effects time and looper time. For example if you don't find any use for the looper and would rather have a very long maximum delay time you can select the 8.6 seconds delay option, which also disables the looper.

- **PC Call State**
 - Engaged (default) : Pedal is engaged when preset is called via PC (MIDI).
 - Bypassed : Pedal is bypassed when preset is called via PC (MIDI).

Options

- **Preset Title Editor** : Edit the title of the current preset.
- **Exp1 → X Setup** : Enter menu for setting up [Expression-1 to DSP X](#) assignment and parameters.
- **Exp1 → Y Setup** : Enter menu for setting up [Expression-1 to DSP Y](#) assignment and parameters.
- **Exp2 → X Setup** : Enter menu for setting up [Expression-2 to DSP X](#) assignment and parameters.
- **Exp2 → Y Setup** : Enter menu for setting up [Expression-2 to DSP Y](#) assignment and parameters.

7. Globals Settings

The Global Settings menu is a collection of settings that are saved on a global scope, i.e. they don't change from preset to preset. These includes:

- Preset Bank
- Switch C/Tap
- Operational Mode
- Bypass Mode
- Dry Signal
- Sum-to-Mono
- Power-up State
- Power-up Preset
- LCD Brightness
- MIDI Channel
- MIDI Out Function
- MIDI Out pins
- Aux/Exp1 Input
- Exp2 Input
- CV Voltage Range
- Favorite Preset
- Looper Position
- Looper Exit
- Looper Volume
- Aux Tip
- Aux Ring
- Aux Tip + Ring
- Aux Switch Theme
- Exp2 Display Update

To enter the Options menu: **HOLD for 2 secs**



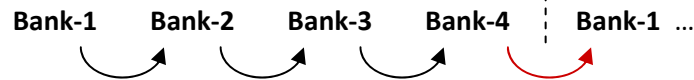
Saving changes - changes are automatically saved to the current preset when exiting the menu by pressing DONE.

Exit without saving changes - you exit the menu at anytime without saving any changes by holding the same button again for 2 seconds.

Globals

○ Preset Banks : [Bank 2 to Bank 32]

Sets the limit of accessible preset bank. For example, if you choose 'Bank 4', then the bank-change cycle is like this:



This self-imposed restriction is not enforced when calling a preset via MIDI. PC messages will be able to call any preset number regardless of this setting.

○ Switch C/Tap

Patch C : switch is used for calling patch C.

Tap Tempo : switch is used for tap tempo.

When switch C/Tap is used for tap tempo, patch C is still accessible via external aux switch or MIDI.

○ Operation Mode

Preset Mode (default) : Pedal operates in Preset Mode.

Stompbox Mode : Pedal operates in Stompbox Mode.

Globals

- **Bypass Mode**
 - Buffered Bypass (default)
 - True Bypass
- **Dry Signal**
 - Dry Signal OFF : Dry signal is disabled at all time (including bypass).
 - Dry Signal ON (default) : Dry signal is enabled.
- **Stereo/Mono**
 - Stereo Processing (default) : Normal stereo algorithm processing.
 - Mono Processing : Mono input/output processing.
- **PowerUp State**
 - Bypassed (default) : Pedal powers up in bypassed state.
 - Engaged : Pedal powers up in engaged state.
- **PowerUp Presets**
 - Last-used (default) : Last-used preset is the default preset on power up.
 - Favorite : Favorite preset is the default preset on power up.
- **LCD Brightness** : [1 to 10].
- **MIDI Channel** : [Channel 1 (default) to Channel 16]
- **MIDI Out Type**
 - Thru (default) : MIDI Out port functions as Midi Thru output.
 - Clock : Midi Out port functions as Midi Clock output.

 When Midi Out is configured as Midi Clock output, Midi messages received at Midi In port are not passed to the output.
- **MIDI Out Pin**
 - Type A (default) : Tip terminal is current sink (Type-A).
 - Type B : Ring terminal is current sink (Type-B).
- **EXP1/AUX Input**
 - 2/3 Button Aux (default) : used for 2 or 3 button aux switches.
 - 1 Button Aux : used for 1 button aux switches.
 - Expression Pedal : Exp1/Aux input is used for expression pedal.
- **EXP2 Input**
 - Exp2 disabled (default) : Exp2 input is disabled.
 - Exp2 enabled : Exp2 input is enabled.
- **CV Range**
 - 5V (default) : Use this setting is your synth CV output voltage range is 5V.
 - 10V : Use this setting is your synth CV output voltage range is 10V.

Globals

- **Favorite Preset** : [Preset 1 (default) to Preset 96] - Select your 'favorite' preset.



When you assign the 'favorite' function (see next page) to an aux switch, you can quickly call a favorite patch of your choosing by pressing that aux switch.

- **Looper Volume** : [1.0 to 10.0 (default)].

- **Looper Position**

Pre FX

: Looper is positioned *before* delay/reverb.

Post FX (default)

: Looper is positioned *after* delay/reverb.

- **Looper Exit**

STOP (default)

: Looper playback will stop when looper mode is exited.

PLAY

: Looper playback will continue when looper mode is exited.

- **Aux switch (Tip)**

- **Aux switch (Ring)**

- **Aux switch (Tip+Ring)**



These are applicable only when **Aux Switch Theme** is set to 'General Ops' or 'Looper Ops' (see next page).



If **Aux Switch Theme** is set to "General Ops", the Aux switches can be assigned to any one of these functions below:

Note 1

- * **Bank Up** - increment (scroll up) bank number by 1.
- * **Bank Down** - decrement (scroll down) bank number by 1.
- * **Next Patch** - Load next patch.
- * **Prev Patch** - Load previous patch.
- * **Patch C** - Load patch C (comes in handy when the on-board C/Tap switch is reserved for tap-tempo).
- * **Fave Preset** - Call the favorite preset.
- * **Bypass/Engage** - Bypass / engage the pedal.
- * **Tap Tempo** - Adjust the tempo with foot taps.

Note 2

- * **X On/Off** - Toggle DSP-X on and off.
- * **Y On/Off** - Toggle DSP-Y on and off.
- * **Instant Auto-Ramp** - Auto-ramping instantly triggered at switch press.
- * **Infinity Capture** - start or stop audio capture in Infinity Reverb algorithm.

< added in firmware v1.7.1 >

Note:

1. When a switch is assigned to any one these functions, holding the switch down will trigger auto-ramping operation, which will be rolled back when switch hold is released. This is applicable only for Tip switch and Ring switch. Ramping action is **not** supported for Tip+Ring switch.
2. Momentary operation is supported. If you press the switch and hold it down for at least 1 second the DSP will return to original state when the switch is released. This can come in handy when you wish to turn the effect on or off only momentarily.

Globals



If **Aux Switch Theme** is set to “**Looper Ops**”, the Aux switches can be assigned to any one of these functions below:

- < added in firmware v1.8.0 > * **Looper Stop** - Stop looper playback.
- * **Looper Play** - Start looper playback.
- * **Looper Record** - Start looper record / dub.

○ **Aux Switch Theme**

< added in firmware v1.2.0 >

- General Ops (default)** : Aux switches control general operations (those listed on the previous page).
- Looper Ops** : Aux switches controls looper operations (REC, PLAY, STOP), essentially they mimic what the on-board footswitches do when looper mode is active.
- Looper FX** : Aux switches controls looper effects (2X SPEED, REVERSE, and ASCEND DUB).



Selecting ‘Looper FX’ will override the individual user assignment (see previous page) to a fixed set of assignments:

Looper FX

- Tip → 2X SPEED
- Ring → REVERSE
- Tip+Ring → ASCEND DUB

○ **Bank Change Info**

< added in firmware v1.4.0 >

- Show Bank Number**
- Show Preset Title (default)**

○ **EXP2 Display Update**

< added in firmware v1.7.1 >

- Display update off**
- Display update on (default)**

○ **Home Scene Info**

< added in firmware v1.8.3 >

- Show Preset Number**
- Show Global Tempo (default)**

8. Powering the Pedal

For powering the Solis Ventus we recommend using a clean and stable (preferably isolated one) power supply unit, specifically designed for powering stompbox pedals.

Power Supply compatibility.

In principle, any power supply unit that is capable of supplying a stable voltage and current (9 VDC and >340 mA, respectively) can be used to power the Solis Ventus. However, we have noticed that the Solis Ventus fails to properly boot up when powered by a PSU that ramps up its output voltage very slowly on power up. Certain components in the pedal do not respond well to slowly ramping power voltage. As the result, Solis Ventus won't start normally, specifically when the pedal and the PSU are turned on at the same instant.

Most PSUs in the market that we know of do not ramp up its output voltage very slowly and thus they work well with the Solis Ventus. However, we have recently identified that the Voodoo Lab's Pedal Power X8 PSU happens to have this slow ramping characteristic. We are assuming that this might be the case too with their other line ups. There is one simple workaround that allows these PSUs to be used with the Solis Ventus: one simply needs to unplug and replug the DC cable, or to have the PSU turned on before plugging in. This effectively bypasses the voltage ramping issue, and presents a solid voltage level to the Solis Ventus.

9. Pedal Resets and Firmware Update

9.1 Pedal Resets

Resetting the pedal will revert the parameters or configurations to factory default settings. There are 2 types of resets which can be performed independently: *Factory Reset* and *Globals Reset*.

◆ Factory Reset

Factory Reset reverts all the presets back to factory settings. This operation will overwrite all user presets, but will not affect the saved global settings.

Step 1: Begin with the pedal powered down.

Step 2: Power up the pedal. While the green light is still flashing, press and hold down footswitch **A/Y** and footswitch **B/X** together. Release when the display reads "FACTORY RESET".

Step 3: Press footswitch A/Y to confirm, or footswitch C/TAP to cancel.

◆ Globals Reset

Globals Reset reverts the global configurations back to factory settings. This operation will not affect the saved presets.

Step 1: Begin with the pedal powered down.

Step 2: Power up the pedal. While the green light is still flashing, press and hold down footswitch **B/X** and footswitch **C/TAP** together. Release when the display reads "GLOBALS RESET".

Step 3: Press footswitch A/Y to confirm, or footswitch C/TAP to cancel.



Resets using SV Studio editor

Factory reset and Globals reset can also be done using the SV Studio editor:

- Menu > Factory Reset
- Menu > Global Settings > Reset to Defaults > Save Config

9.2. Firmware Update

Firmware updates may be made available for bug fixes and/or feature additions/modifications. You will need to connect your pedal to your computer via USB to perform a firmware update.

Before you begin the update, make sure you have the **latest version** of the **SV Studio** editor software installed in your computer. The software is available for download on our website.

Tips: It's recommended to first back up your presets before starting the update. The **SV Studio** software has the functionality to create a backup: *Menu > Backup*.

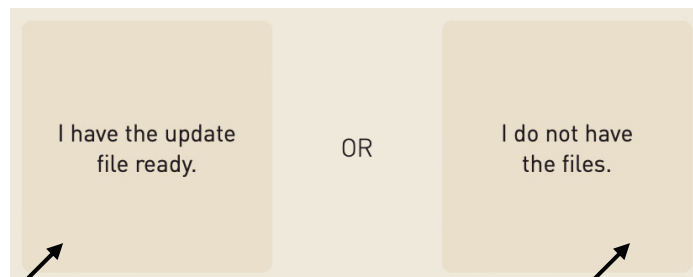
Update Procedure:

Step 1: Begin with the pedal powered down.

Step 2: Power up the pedal. While the green light is still blinking, press and hold down footswitch **A/Y** and footswitch **C/TAP** together. Release when the display reads "FIRMWARE UPDATE".

Step 3: Connect the pedal to your computer via USB and start the **SV Studio** software.

Step 4: Load the firmware file.



Click this button if you prefer to manually load the firmware file that you have downloaded from our website.

Click this button if you prefer the SV Studio to download the file automatically.

Step 5: Click the '**Run Update**' button.

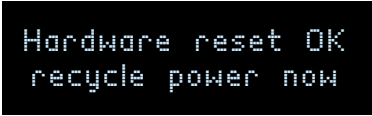
When the update is complete the pedal will automatically reboot itself and will be ready for use.

Handling ‘Error Events’ during firmware update.

Should you encounter an error event (very rare) during a firmware update, the recommended course of action is to simply repeat the update process again.

If repeating the update does not resolve the issue, or if the update process itself gets stuck mid-update indefinitely, carry out the following recover steps:

1. Power down the pedal.
2. Re-apply power to the pedal. While the center LED is still blinking press and hold all three footswitches. Release the hold when the screen says:



Hardware reset OK
recycle power now

3. Power down the pedal.
4. Perform the firmware update again.

Specifications :

- Input impedance : 1 Meg Ohm.
- Output impedance : 500 Ohm.
- Max input level : +7.23 dBV = 9.45 dBu = 2.3 V RMS = 6.5 Vpp.
- SNR : 115 dB typical.
- AD/DA : 24-bit, 40 KHz .
- Bypass : Buffered or True bypass.

-
- Input jack : 1/4" TS.
 - Output jack : 1/4" TS.
 - MIDI In/Thru jacks : 1/4" TRS.
-

-
- Power source : 9VDC (negative center, 2.1 mm inner diameter)
 - Current draw : < 350 mA.
 - Dimension : 17 x 12 cm (6.7 x 4.6 inch)
-

Key Features :

- Dual engine Delays and Reverbs.
- Runs two algorithms simultaneously.
- Achieve any delay-delay, reverb-reverb, or delay-reverb pairing.
- Analog dry-through.
- 96 presets.
- True spillover and bypass trails.
- Flexible routing schemes: **Series**, **Parallel**, and **Dual Mono**.
- Independent Crossover filters and Dynamics engines.
- Flexible usage: **Preset Mode** or **Stompbox Mode**.
- Stereo Looper (up to 40 seconds).
- Stereo or Mono processing.
- Instrument Level and Line Level compatibility.
- Aux switches (up to 3 buttons) control input.
- 2 expression pedal inputs (with CV compatibility).
- MIDI Input and MIDI Thru/Clock.
- High-contrast OLED display.
- Buffered or True bypass.

Visit the product page at our website for more demo videos, sound clips, FAQs, and updates.



Email : info@gfisystem.com / support@gfisystem.com

Web : www.gfisystem.com

GFI System

Jakarta, Indonesia.

Revision History

Rev B (Nov 2024) - Pilot public release.

Rev C (Dec 2024) - Added section 1.5: Auto Ramping (firmware v1.2.0).

- Added “Aux Switch Theme” option in Global Settings (firmware v1.2.0).

Rev D (Jan 2025) - Added “Bank Change Info” option in Global Settings (firmware v1.4.0).

Rev E (Jan 2025) - Changed the wording for MIDI Out Pin selection from

- ‘Tip Active’ to ‘Type-A (standard)’*, and *‘Ring Active’ to ‘Type-B’*.

- Fixed the typo for the number of factory preset (page 6, first paragraph).

Rev F (Feb 2025) - Added ‘Input Pad’ control to the Options menu (firmware v1.6.0).

Rev G (May 2025) - Fixed typos on page 26.

- Added “Resets using SV Studio editor” sub-section on page 27.

- Added “Initiating Audio Capture for Infinity Reverb algorithm” sub-section on page 9.

- Added ‘Infinity Capture’ to Aux switch function (firmware v1.7.1).

- Added ‘Exp2 Display Update’ option in global settings (firmware v1.7.01).

Rev H (Nov 2025) - Added more information to the “Tempo Controls and Options” section (chapter 1, section 1.4), pertaining to the new features added in firmware v1.7.16.

- Updated the Dynamics Threshold parameter lower limit information (page 12).

Rev I (Feb 2026) - Added “Memory Allocation” in Options menu (page 22).

- Changed the “Sum-to-Mono” option in global setting menu to “Stereo/Mono.

- Augment the information on the topic of ‘Tempo’ on page 8 and ‘Looper’ on page 17.

The above revisions pertain to the updates introduced in firmware 1.8.0.

Rev J (Mar 2026) - Added “Home Scene Info” in Global Settings menu (page 27).

- Added a new sub-topic in section 9.2 Firmware Update.

Rev K (Jul 2026) - Fixed the erroneous information on the MIDI-TRS mapping on page 18.