SONALKSIS

Universal Plug-in Guide

Contents

Sonalksis Plug-ins

Introduction

This universal plug-in guide provides general information relating to Sonalksis software plug-ins. It describes essential concepts, presents an overview of Sonalksis plug-in technology, explains user-interface controls common to all Sonalksis plug-ins, and answers questions regarding authorisation methods and licensing policy.

Plug-in Operation Guides

You can find detailed information regarding the operation of specific Sonalksis plug-ins within the respective individual plug-in user-guides. When you install any Sonalksis plug-in, the respective user-guide is installed simultaneously. All plug-in user guides are also available for download from the Sonalksis website.

Audio Plug-ins, Formats and Hosts

Sonalksis audio plug-ins are software processors that use sophisticated mathematical algorithms to manipulate sound for creative control or effect. Plug-ins only operate within the context of a 'host' application - literally *plugging into* the host, to extend or enhance the capabilities of the host. You must therefore ensure that you have installed a compatible audio host and are familiar with accessing plug-ins in your host. Sonalksis plug-ins exist in several standard 'formats', to ensure compatibility with the majority of professional hosts.

Installation

System Requirements
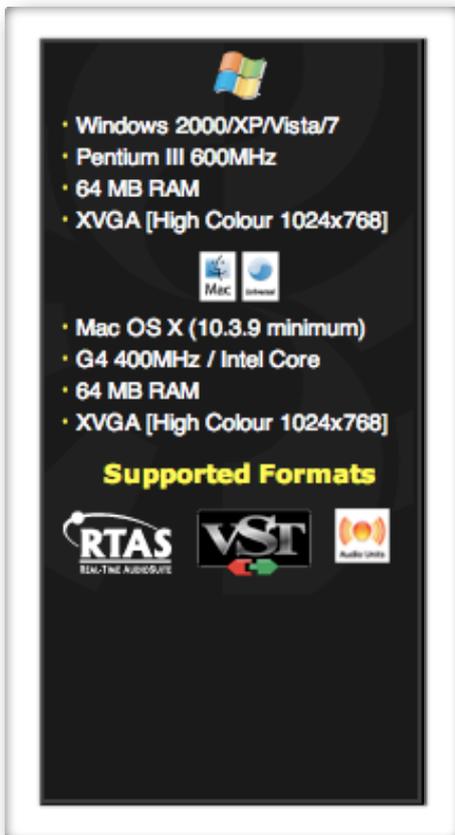
Sonalksis plug-ins are fully compatible with the very latest versions of both the Windows and OS X operating systems. Sonalksis plug-ins can also be installed on older PC systems running Windows XP or later, or Mac systems running OS X 10.3.9 or later.

The older 'Power PC' G4/G5 Mac hardware is also supported through the *Universal Binary* system.

The minimum system requirements for individual Sonalksis plug-ins will vary according to the specific plug-in. All Sonalksis plug-ins will technically function under relatively 'low spec' systems.

However since plug-ins must run within the context of an audio host, and it is often imperative to be able to run multiple plug-ins simultaneously, we recommend a minimum 1GHz processor and 512MB RAM in order to use Sonalksis plug-ins for contemporary professional audio purposes. Ultimately though, if your system meets the specification requirements of your audio host, it will almost certainly also meet the requirements for Sonalksis plug-ins.

It is also recommended that your audio computer system is internet enabled, as authorisation of your software will then be transparent when you install the plug-ins. If your audio computer is not online then you will need alternative internet access to obtain a license authorisation file.

Sonalksis plug-ins support the RTAS, VST and AudioUnit formats, so you should ensure that your audio host is compatible with one of these formats.

Installing with the Plug-in Manager

The Sonalksis 'Plug-in Manager' is an application that takes care of downloading, installing, authorising and updating your Sonalksis plug-ins. You need to use the Plug-in Manager to install and authorise your plug-in software.

The Plug-in Manager greatly simplifies the task of managing multiple Sonalksis plug-ins, letting you know when updates or new plug-ins are available, and allowing you to access evaluation versions of the software. You can download the plug-in manager from the Sonalksis website. Extensive instructions regarding how to install your plug-ins can be found in the Plug-in Manger user guide.

Authorisation

Sonalksis plug-ins are authorised by the Plug-in manager. If your computer is internet enabled, all authorisation takes place automatically. When you install new plug-ins, any plug-ins for which you have licenses will be authorised.
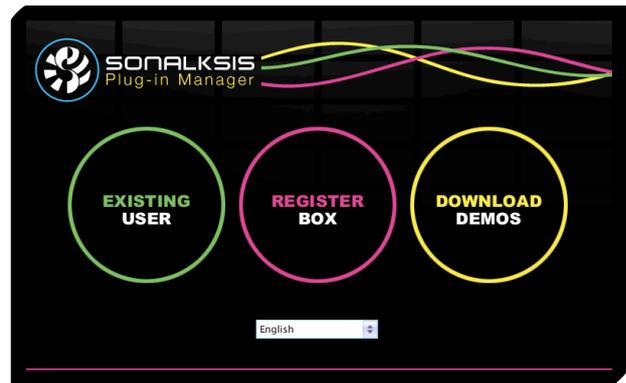
If your computer is not internet enabled, you must go to the 'Product Activation' section on the Sonalksis website in order to obtain an authorisation file. You will need the 'Activation Code' that is displayed when you run the Plug-in Manager on your offline system. You can then download your authorisation file which you simply need to drag-and-drop onto the Plug-In Manager window.

If you have installed our evaluation software prior to a purchase, you do not need to re-install the software after purchasing a license - you simply need to run the Sonalksis *Plug-in Manager* once more in order to authorise your software.

You can install and authorise your software on multiple computer systems, according the terms of the Sonalksis software license agreement. See the section on License Information for further details on the Sonalksis licensing policy.

Software Updates

The Plug-in Manager can also be used to check for updates and download new software, in addition to enabling you to evaluate new applications.

Viewing License Details

You can verify that a plug-in is authorised by viewing the license registration details. License details are displayed on the plug-in interface, so you must open the plug-in in your audio host.

Plug-ins which have a 'back panel' will display the license details here (the back panel can be accessed by clicking on the graphical section of the Sonalksis logo, or by activating the *Setup* button).

A plug-in back panel, displaying 'unlicensed' registration details.

All other plug-ins will display the license registration details within the *Setup* screen.

A registration screen displaying license details

Renting

If you have rented a Sonalksis plug-in product, you have essentially purchased a time-limited license for your product. For maximum flexibility, your license is not initially active. This allows you to choose exactly when your rental period begins, regardless of your purchase date.

Rental Activation

You must activate your rental license before you can authorise your plug-in's. Rental licenses can be activated any time after purchase, from within your Sonalksis user-account.

To active your rental session, you must login to your user-account on the Sonalksis website and find your product listed in the 'My Products' section. You will see a button displaying 'Activate Rental'. Once you select this, your product time-limited license will be active and you can install and authorise your software in the usual manner (see the Plug-in Manager user guide for detailed instructions on installation and authorisation).

Plug-in Technology
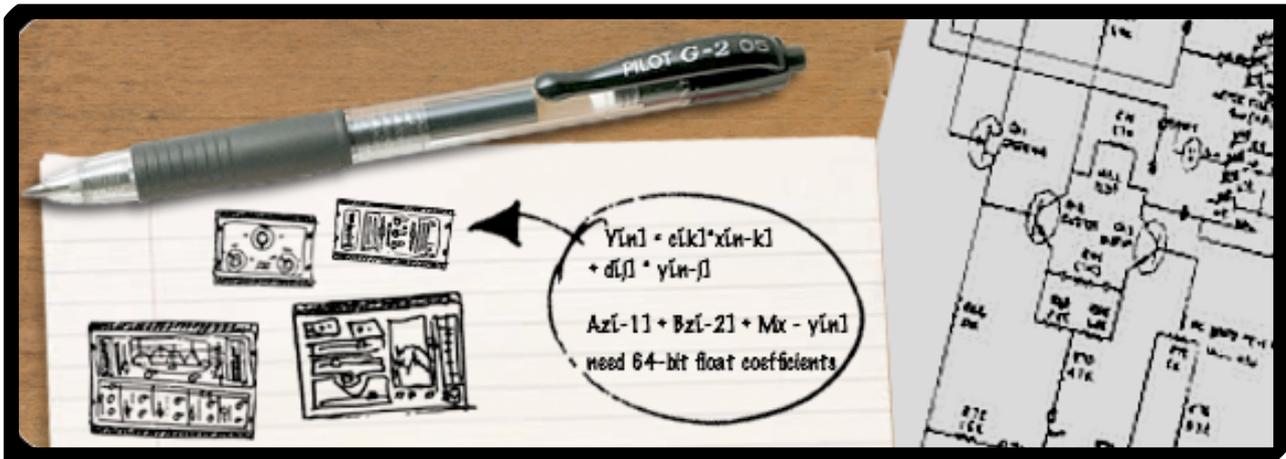
State-Space circuit models

Many Sonalksis plug-in products follow a design philosophy that aims to maintain the sonic aesthetic of traditional analogue processing. In order to achieve this, they use a sophisticated 'state-space' modelling technology. This enables analogue signal path characteristics to be captured in a digital design.

Standard digital implementations of processes such as Compression or EQ rely on emulating the 'external' characteristics of the process. This means the processor is designed according to mathematical equations that relate the output signal to the input signal. However, factors that are extremely important in the design of high quality audio processors, such as the transient response, or the response to dynamic parameters, are typically part of the 'internal' description of a processor, and as such can not be accurately modelled using normal methods.

Sonalksis state-space technology superimposes the internal characteristics of a processor onto the external model, meaning the state-space model provides a more detailed description of the processor than normal 'input-output' emulations. Plug-ins using this technology are based on a real analogue prototype circuit, and modelled with state-space technology, so the resulting processor retains the true original analogue sound.

PURE digital
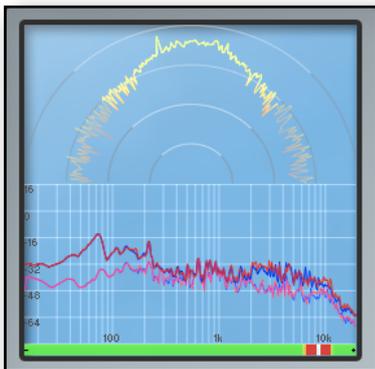
Not all Sonalksis plug-ins aim to model analogue circuits. There are many audio processes which greatly benefit from purely digital processing, and many effects which simply are not possible in the analogue domain. Some Sonalksis plug-ins, like the Mastering Suite, use our PURE digital technology - algorithms that result from years of development in complex signal processing mathematics, building upon contemporary academic research to achieve the ultimate in digital processing, exploiting features that can only be achieved using digital techniques.

SILC Smooth Control Changes

All Sonalksis plug-ins use our SILC (Sample Interpolating Level Controls) technology, which ensures that parameter changes are totally smooth, regardless of the control or automation resolution of the audio host, and eliminates even micro-level glitches.

Processing Resources

When it comes to processing resources, you can never have too much processing power in the field of digital audio processing, and with this in mind all Sonalksis algorithms are highly optimised to require as small amount of your systems resources as is technically possible, without compromising features such as our standard 64-bit floating point internal processing precision.

All Sonalksis plug-ins are individually tailored to suit respective platforms. Thus when running the plug-ins on a PC, optimisations for both INTEL and AMD processors ensure the best possible performance is obtained, regardless of the processor. Similarly, the Mac versions benefit from optimisations designed to take advantage of its architecture, with regard to both Intel based Mac systems and older Power PC (G4/G5) models.

Plug-ins are further optimised to ensure that processing resources are only allocated when necessary, so for example closing a plug-in editor interface window will switch-off the high-quality metering algorithm, and turning off any band of a multi-band plug-in will also de-allocate resources, while ensuring that reintroducing the element does not cause any disruption or glitches.

Latency

All Sonalksis plug-ins that use our *State-Space Analog* technology are inherently 'zero-latency' processing devices. The plug-ins work just like the true analogue circuits that they model - all processing is instantaneous, so there is no latency (delay) introduced in the audio signal.

Plug-ins which use our PURE technology take advantage of digital processing possibilities. Some of the 'magic' inside the processors depends on a knowledge of what is going to happen a short time before it actually does. Obviously, in reality, knowing the future is impossible so therefore some of the plug-ins introduce a short delay to the signal in order to 'look ahead' at the audio before processing it. This type of processing method is very common among pure digital audio plug-ins, and the 'latency' that it introduces can usually be compensated by your audio Host. Be aware that depending on which host you use you may need to explicitly enable this delay-compensation feature – you should refer to your Host documentation for further details on how to do this.

If a Sonalksis Plug-in potentially introduces latency into the audio signal, full details are specified in the respective operational user guide.

> You should note that if your host application audio buffer is smaller than the latency of the plug-in, you may experience performance issues on your system. We therefore recommend that you ensure your audio host buffer is adjusted accordingly.

Common Interface Guide

Sonalksis plug-ins share many common features, such as control methods, setup options, bypass buttons and A/B switching. This section describes these common features. Note that not all Sonalksis plug-ins utilise all of these features.

Control Methods

All plug-in settings are altered through the interface window displays and controls. A 'Control' can be any one of the following:

• a circular knob

• a linear slider
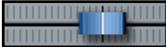
• a button/switch

• a text-display

• a display *handle*

Button type controls can simply be clicked with the mouse at the appropriate point to select a respective setting. Text-display parameters can be entered numerically by clicking on the respective text box with the mouse. To change knob, slider, or display-handle control settings, click and drag the mouse.

There are two selectable control modes when moving circular knob controls:

• *Circular Mode* - In order to move the knob when it is in 'Circular Mode', the control must be selected close to its 'pointer', and dragged in a circular motion clockwise or anticlockwise to increase or decrease the value of the parameter.

> The control mode is set via a user preference – accessed by clicking the 'SETUP' button. See individual plug-in operation user guides for further details about setup preferences.

• *Linear Mode* - When the knob is in 'Linear Mode', it can be 'grabbed' by clicking anywhere on the knob, and movements of the mouse vertically either up or down will increase or decrease the value of the respective parameter.

Sometimes it is necessary to fine-tune a particular control. There are three methods that may be useful in this respect:

• *Velocity Sensitive mode* – if this user preference is active, any parameter changes are relative to the speed of mouse movement on a knob/slider. Thus a very slow mouse movement will induce a very small change in the respective parameter value, while a fast movement will induce a large change.

- *Fine Control Mode* - Holding down the 'Shift' key decreases the sensitivity of mouse movements, thus enabling finer control over the parameter. If 'velocity sensitivity' is active, controls exhibit even greater relative sensitivity when moved slowly.

- *Lock Mode* - 'Double-clicking' a control acts to 'lock' the mouse to that control. This is useful if one parameter is being adjusted for an extended period, as the mouse button does not have to be held down. To release a control from this mouse-lock, simply click the mouse once more.

A control can easily be reset to its default setting. To reset a control, hold the *Ctrl* key [PC] or *Apple/Command* key [Mac] before clicking it with the mouse.

Control Automation

Unless otherwise stated in the operation user guides, all Sonalksis plug-in interface parameters may be automated. You should refer to your host software documentation for details on automation modes and procedures.

Preferences

Most Sonalksis plug-ins have a number of user preferences, accessed via a *Setup* button. Preferences will usually affect every instance of a plug-in, and define the default initialisation setup of the plug-in. Preferences are grouped into three distinct areas:

- *Control* options define operational settings such as mouse sensitivity.
- *Display* options define characteristics of the interface display such as metering types.
- *Processing* options affect certain global signal processing characteristics of the plug-in.

All preferences are stored and recalled according to the user logged into the host system, therefore a unique set of preferences is maintained for each system user.

Presets

Most plug-ins have a number of built in presets, accessed via a *PRESET* button on the plug-in interface. Simply click on the desired name to activate the snapshot of parameter values.

Individual presets or banks of presets can be created, stored and recalled if your plug-in host supports this feature; this is external to the plug-in, so please refer to your host software guide for further details.

A/B Banks

Most plug-ins are equipped with two programme banks [*A* and *B*] that can store an entire set of control parameter values at the touch of a button. Clicking the A/B button will toggle the active programme bank. The active parameter bank is highlighted on the *A/B* button and can be copied to or swapped with the inactive one. This can be useful for instance on occasions when two different settings must be auditioned in quick succession in order to decide on the most appropriate sound.

To audition an A/B comparison, set your first processor characteristic in the usual manner, then click A->B (note that this button is labelled COPY on some plug-ins). This will copy the current settings to buffer B. Next, set up the second characteristic as required. The active buffer [buffer 'A'] now holds the settings of your second response, while buffer B holds the initial response settings. Clicking on A/B will swap the two buffers, so you can now flip between both programme settings to audition or automate the

Clicking the *RESET* button will set all parameters in the active bank to their default values.

Input and Output

All Sonalksis plug-ins allow control over the input and/or output signal level via a *gain* or *attenuation* parameter. While it is generally important to ensure that the output level does not exceed 0dBFS, the very high precision internal processing of the plug-ins assures a headroom large enough to avoid internal clipping, thus it is not technically necessary to adjust input levels. However it can be useful in certain circumstances to trim an input, if the signal level is so great as to limit the flexibility of the plug-in due to parameter constraints.

Bypassing a plug-in

All plug-ins feature a master *Power* or *Bypass* button. This is an effective bypass control that may be used for simple 'In/Out' comparisons. When a plug-in is switched off, any numerical parameter displays will disappear and any meters and graphical display will darken, giving a clear visual indication of the bypassed status of the plug-in. Your host software may also provide a bypass to the plug-in, however using the bypass on the plug-in can provide superior results, as it guarantees a glitch-free on/off transition using a professional grade cross-fade.

Meters
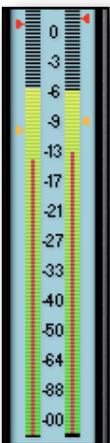
Most Sonalksis plug-ins have a range of metering options available via the preferences. Typically there is a choice of Digital-Peak, PPM and VU metering ballistic. The meters on Sonalksis plug-ins all use high-quality metering algorithms, implemented at the sample rate and not the display (refresh) rate like many less sophisticated plug-ins. The indication of any 'overload' (an output greater than 0dBFS) is therefore also sample accurate.

If the signal exceeds 0dBFS, it is possible to automatically reduce the output gain by an amount equal to the excess level:

When the level 'clips', the 'Over' LED is illuminated. Clicking the 'Over' LED while holding the 'Ctrl' key [PC] or 'Apple/Command' key [Mac] will attenuate the OUTPUT GAIN by exactly the amount of the clip excess.

Licence Information

The following overview should help you understand the primary Sonalksis licensing conditions, and answer important questions such as when you are entitled to install our software on multiple computer systems and whether you can sell/transfer your licenses. Our full license policy, available on the Sonalksis website and displayed when you install Sonalksis plug-ins, contains the complete policy details.

Like almost all software, Sonalksis software is not sold; instead, when you 'purchase' a product from Sonalksis you are actually purchasing a license to use a copy of that product. This license has certain terms and conditions.

Licence Types
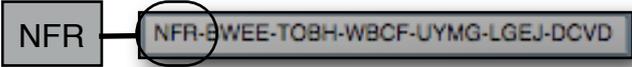
NFR ── NFR-BWEE-TOBH-WBCF-UYMG-LGEJ-DCVD

Sonalksis licenses have 'codes' which determine the type of license you have purchased. Depending on the licence type, certain restrictions may apply to your license. Most licenses are 'standard' licenses, and if you purchased your Sonalksis software through a dealer it is likely that you have a standard license. You can view your license codes from within your Sonalksis user account, or directly in each individual plug-in from the 'setup'.

The first three characters of your license code determine the license type. Codes which begin NFR (Not For Resale), EDU (Educational), TRP (Trade Partner), RNT (Rental), SIT (Site) or PRM (Promotional) are 'special licenses' with certain restrictions. NFR, SIT, TRP and RNT licenses can not be transferred. TRP licenses are for demonstration only and can not be used for commercial purposes. RNT licenses are only valid for a specific period of time, as denoted when you activate the license. SIT licenses are valid for use by multiple users simultaneously. All other 'special licenses' are valid for use only by a single user.

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Transferring Licenses

If you have a standard license, purchased from Sonalksis or an official Sonalksis dealer, you can transfer your license rights once, after which the license will become non-transferrable. If you transfer your license, you should remove all related software from all of your computer systems. If a license is transferrable, you can transfer it from within your user account on the Sonalksis website.

EDU and PRM licenses can only be transferred if upgraded to a standard license.

Support

You can visit the Sonalksis website to find the latest product information. If you are a registered user you will automatically receive relevant information about new releases and updates, unless you unsubscribe from this service.

All Sonalksis plug-ins are installed, authorised and updated using the 'Plug-in Manager' application. You can download this application from the Sonalksis website.

If you encounter any difficulties when installing or using our products, please ensure that you have read all appropriate documentation, including the relevant user guides and FAQ on our website before contacting us.

If you are unable to resolve your issue after reading all appropriate documentation, you can log in to your Sonalksis user account on our website, and access the 'Support' section where you can request direct assistance.

www.sonalksis.com/support

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