SPL Analog Code™ Plug-in
Manual

SPL

Transient Designer™

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Transient Designer
The Analog Code plug-in

Native Version (RTAS, AU and VST): Order # 2880
TDM Version (includes RTAS, VST and AU): Order # 2881

Manual Version 1.1 – 1/2009

This user's guide contains a description of the product. It in no way represents a guarantee of particular characteristics or results of use. The information in this document has been carefully compiled and verified and, unless otherwise stated or agreed upon, correctly describes the product at the time of packaging with this document.

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Thank you for your purchase of the Transient Designer plug-in. The native version includes licenses for systems supporting RTAS (Digidesign ProTools), VST (i. e. Cubase, Nuendo, WaveLab, ...), and AU (Apple Logic).

The ProTools TDM version includes licenses for systems supporting TDM, RTAS, VST and AU plug-ins. Therefore, the native formats can be installed additionally to the TDM version with the same license, for example to support other audio softwares, too.

Your software is registered for the e-mail address and the iLok account you have submitted with your purchase. Installation procedures for both native and TDM versions are identical. The number of installed instances is not limited.

MAC Installation

You may want to visit the download section of our website and check for the latest version (spl.info/software/download) before installation. Execute the Transient Designer installer for MAC.

Please note: The native installer includes RTAS, AU & VST formats, the TDM installer includes all formats. You can select one or more of these formats during installation.

WINDOWS Installation

You may want to visit the download section of our website and check for the latest version (spl.info/software/download) before installation. Execute the Transient Designer installer file (setup.exe).

Double-click the left mouse button to start the installation procedure from CD-ROM or use the right mouse button and select the "Save as ..." command to save the installer file on your hard disk before starting the installation.

Please note: The native installer includes RTAS & VST formats, the TDM installer includes all formats. You can select one or more of these formats during installation.

The Analog Code

For more than two decades, SPL of Germany is well-known as manufacturer of handmade analog hardware processors. Innovations like the Transient Designer are accompanied by a complete analog range from frontend to backend and culminate in the Mastering Series with exemplary specs thanks to SPL's proprietary 120 V rails technology.

While SPL's hardware has been fascinating audio professionals from home studio owners to mastering engineers in the world's most famous facilities, there has been a continuing and ever growing demand for digital (DAW) users to be able to enjoy this technology.

Our software design team has managed to transfer the class and excellence of our analog processors into the digital domain. Latest methods for high-precision modeling of our analog circuit designs now give us results beyond a pure mathematical approach. The digital products are so amazingly close to their analog equivalents that we call them The Analog Code plug-ins.

Transient Designer

The Transient Designer plug-in provides a revolutionary concept for level-independent dynamic processing. It is completely different in principle from common compression technologies that are based upon processing signals from a specific signal level.

Working with the Transient Designer is very simple: Attacks can be amplified or attenuated and sustain may be prolonged or shortened. However, the possibilities for studio and live applications are seemingly endless.   ⋯⋯⟩

Introduction

The technical foundation for processes inside of the analog paragon is SPL's Differential Envelope Technology (DET). DET allows level-independent dynamic processing by calculating differences in generated envelopes.

DET represents a radically different approach to dynamics processing, both from the technical and creative way of signal processing: thanks to the level-independent processing the setting of a threshold is not necessary. Other common controls, for example parameters for time-constants are set automatically—and in a musical manner as they follow the characteristics of the input signal. After all, only two controls allow to completely reshape the attack and sustain characteristics of a sound. Attack can be amplified or attenuated by up to 15 dB while sustain can be amplified or attenuated by up to 24 dB.

Thus, in a very obvious and simple way, the Transient Designer opens a whole new dimension in dynamic processing with entirely new, stunning and vast possibilities for dynamic manipulation and processing that cannot even be duplicated with several daisy-chained, conventional compressors or other dynamics devices.

The Transient Designer plug-in is modeled from the SPL RackPack module. A new feature of this module in comparison to the stand-alone hardware versions is the output gain control that allows to compensate for level changes after processing the signal. This ensures a simple and safe adjustment of levels and helps avoiding internal clipping.

Each SPL plug-in provides the A, B, C, D settings feature to save four different sets of adjustments. Much faster than the usual saving and recalling of presets, the settings can be stored and recalled by just one click. The settings can also be included into the automation of an audio software to apply different sets of parameters to specific parts of a song.

On

With the ON button you can turn the Transient Designer on or off. The ON button is illuminated when the plug-in is activated. You can also click on the Power-LED to activate or bypass the plug-in.

Link

The LINK mode can not be activated when a mono track is processed. Thus the LINK mode can only be activated when a stereo track is processed. In that case the louder of the two stereo tracks determines the control signals (according to ATTACK and SUSTAIN settings). If the LINK mode is not activated for a stereo track, left and right channel are processed independently according to their individual levels.
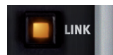
Attack

With the ATTACK control you can amplify or attenuate the attack of a signal by up to 15 dB. Positive ATTACK values emphasize attack events, negative ATTACK values smooth out the attack envelopes of sound events. For an extensive description and explanation of the possible applications of the ATTACK control please refer to "Applications" on page 9 cont.

Sustain

With the SUSTAIN control you can amplify or attenuate the sustain of a signal by up to 24 dB. Positive SUSTAIN values lengthen the sustain, negative SUSTAIN values shorten the sustain. For an extensive description and explanation of the possible applications of the SUSTAIN control please refer to "Applications", page 9 cont.

Control Elements

Output Gain

The OUTPUT GAIN control allows you to reduce the output signal by up to -22dB or boost it by up to +6dB. This ensures that following devices receive an optimized level. The center position at 12-o'clock equals 0 dB output. If the OVL-LEDs keeps flashing reduce the Output Level to avoid internal clipping.

Power LED

With a click on the POWER LED you can turn the Transient Designer™ on or off. The POWER LED is illuminated when the plug-in is activated. You can also click the ON button to activate or bypass the Transient Designer.

Signal LED

The SIG. LED indicates that an audio signal reaches the input. In the analog world this LED helps the operator especially in complex setups to determine immediately whether the Transient Designer™ actually receives any signal. In the digital domain it simply tells you that the channel where you inserted the plug contains a signal that is loud enough to ensure correct processing.

Overload LED

The OVL LED indicates internal clipping. Wether the clipping is audible or not depends on the kind of audio material you are processing. Nevertheless it should be avoided that the OVL LED illuminates. Use the Output Gain control to reduce the output level if the OVL-LEDs keeps flashing.

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Settings A, B, C, D

The settings feature allows to store four different sets
of adjustments (A, B, C, D). Much faster than with the
usual save and recall preset dialogs, the respective current setting
is stored automatically when you switch to another setting – to re-
call previous settings by just one click.

For example, leaving setting A (by calling another setting) stores
the current parameter setting under A, calling B restores the last
adjustment made under B.

Settings A, B, C, D can also be included into the automation of host
applications to apply different sets of parameters to different parts
of a song.

Mouse Wheel Control

All SPL Analog Code plug-ins support mouse wheel control for
rotary controls and faders. Place the mouse cursor over a rotary
control or fader and move the wheel or scroll ball of your mouse
to adjust the control or fader. Hold the CTRL (Windows) or APPLE/
COMMAND key while moving the wheel or scroll ball for fine adjust-
ments with higher control resolution.

Applications

Overview

The Transient Designer™ RTAS/AU/VST plug-in can be used with any host application that supports VST (i. e. Cubase, Nuendo, WaveLab, ...), AU (Apple Logic), or RTAS (Digidesign ProTools).

You can manipulate the attack and sustain characteristics of a signal regardless of level in the most intuitive and simple way. Usually equalizers are used to separate instruments in a mix – the tonal aspect of the signal is considered, but not the temporal aspect.

The Transient Designer now opens this next dimension in signal processing. By manipulating the attack and sustain curves of a sound event, the mix can be made to sound more transparent. Instruments can be mixed at lower levels while still maintaining their positions in the mix—but occupying less space.

The following examples are given as suggestions and examples. The described procedures with specific instruments can of course be transferred to others which are not mentioned here.

Drums & Percussions

The processing of drum and percussion sounds is probably the Transient Designer's most typical application.

- Emphasize the attack of a kick drum or a loop to increase the power and presence in the mix.

- Shorten the sustain period of a snare or a reverb-flag in a very musical way to obtain more transparency in the mix.

- Shorten toms or overheads without physically damping them.

- Adjust the apparent "distance" of the microphone by simply varying the ATTACK and SUSTAIN values.

- The Transient Designer is a perfect alternative to noise gates. Since it adapts processing to the original signal, the sustain is shortened more musically than with fixed release times – within seconds a drumset is reliably free from crosstalk.

- Enjoy an amazingly simple integration of drum sounds into a mix. If the acoustic level of a snare is expanded to approximately +4 dB by increasing the attack value, the effective increase of peak levels in the overall mix is merely about 0.5 dB to 1 dB.

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Applications

Drums: Ambience

If your drums happen to sound as if the room mics have been placed in a shoe closet, the Transient Designer can immediately turn that sound into the ambience of an empty warehouse. Just send the room mics stereo channels through the Transient Designer and crank the ATTACK control to emphasize the first wave.

Now slowly increase SUSTAIN values to bring up a "all-buttons-in-1176-sound" room tone—but without pumping cymbals. For a solid and driving rhythm track just fine-tune the SUSTAIN control to make sure that the room mic envelope ends more or less exactly on the desired upbeat or downbeat.

Guitars

Use the Transient Designer on guitars to soften the sound by lowering the ATTACK. Increase ATTACK for in-the-face sounds, which is very useful and works particularly well for picking guitars. Or blow life and juice into quietly played guitar parts.

Distorted guitars usually are very compressed, thus not very dynamic. Simply increase the ATTACK to get a clearer sound with more precision and better intonation despite any distortion.

Heavy distortion also leads to very long sustain. The sound tends to become mushy; simply reduce SUSTAIN to change that. If you, however, want to create soaring guitar solos that would make even David Gilmour blush, just crank up the SUSTAIN control to the max and there you go.

On acoustic guitar tracks you can emphasize the room sound by turning up SUSTAIN. If you want the guitars to sound more intimate and with less ambience, simply reduce SUSTAIN.

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Bass: Staccato vs. Legato

Speaking of bass: Imagine a too sluggishly played bass track ... you may not have to re-record it: Reduce the SUSTAIN until you can hear clear gaps between the downbeats—the legato will turn into a nice staccato, driving the rhythm-section forward.

The Re-Invention Of Reverb

With all reverb applications mentioned below, the left and right channels of the Transient Designer are panned hard to left and right (or where they would have been panned to without the Transient Designer™) to achieve the same stereo image.

Always and everywhere the same reverb presets – boring, aren't they? Try looping the left and right output of your reverb through the Transient Designer.

Create two mono tracks panned hard left and right with the same audio material and insert the same reverb in both channels in an insert before the Transient Designer plug-in. Now crank the master ATTACK control to the maximum and reduce SUSTAIN to a bare minimum. The intensity of the reverb is now much higher in the beginning while the reverb time is reduced.

The opposite can be just as intriguing: manipulate a reverb pattern so that it takes on a pyramidal slope. Turn the ATTACK all the way to the left and SUSTAIN all the way to the right. Now the beginning of the reverb is strongly reduced whereas the sustain blossoms and seems almost endless (obviously that will only happen if the decay of the reverb in the actual reverb device has been set to a sufficient value—a signal must always be present as long as the sustain time lasts).

Applications

Backings

A common problem especially with tracks that are recorded and mixed in different studios: Backings lack of ambience, and finding a reverb that "matches" takes time ... so simply emphasize the original ambience by turning up the Transient Designer™'s SUSTAIN control. And the opposite problem, too much ambience, is similarly simply solved with the opposite processing—just reduce SUSTAIN.

Keyboards & Sampler

Sounds in keyboards and samples usually show a lot of compression., not maintaining enough of their natural dynamic. Increase the ATTACK values to re-gain a more natural response characteristic. The sounds occupy less space in the mix and appear more identifiable even at lower volumes.

Post Production

When dealing with overdubs in movies you can easily add more punch and definition to effect sounds from any sample library.

The same applies to outdoor recordings that suffer from poor microphone positioning—simply optimize them afterwards.

Mastering

Like with any good thing, you also have to know where not to use it. For example, using a Transient Designer in mastering usually is not recommended, as it is rarely a good idea to treat a whole mix at once. Instead, treat individual elements within the mix.

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