

SPL Analog Code™ Plug-in Manual



TwinTube Processor

TwinTube Processor **The Analog Code plug-in**

Native Version (RTAS, AU and VST): Order # 2920

TDM Version (includes RTAS, VST and AU) : Order # 2921

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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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Installation

Thank you for your purchase of the TwinTube 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 TwinTube 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 TwinTube 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

Since more than two decades, SPL of Germany is well-known as manufacturer of handmade analog hardware processors. Innovations like the Vitalizer® and 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 120V 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 now has managed to transfer the class and excellence of our analog processors into the digital domain. Latest methods for high-precision component modeling of our analog 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.

TwinTube

The TwinTube module is the first combination of two essential tube effects in a single processor, that is, saturation effects along with harmonics processing. Both stages work separately from each other and are based on individual processing stages. The effects can therefore not only be applied both individually or separately, but also in common.

Saturation effects are generated through the tube being pushed to and beyond its normal operating limits. In contrast to semiconductors, a tube thus pushed to such levels does not clip from a certain level, approaching more gradually its level limits and thereby producing its typical tonal result, which in audio signal processing can have such often profitable aural effects. →

Introduction

On one hand (and depending on the amount applied), from subtle to extensive harmonic distortion and on the other hand, a compaction of the sonic event, that is, a limiting effect that exhibits a pleasant, rounded or soft sound. Acoustically and also in its range of applications this can be compared very well with tape saturation effects. Harmonic distortion and limiting are the generally known, “classic” tube effects, which are today cornerstones of sound processing.

But other less known and potentially important effects are a tube’s ability for improving presence and spacial qualities through its processing of specific regions of the overtone series. In the analog original of the TwinTube Processor, a special circuit comes into play for overtone/harmonic processing that involves a combined coil/condenser system working in conjunction with the tube. The control reacts dynamically to the audio signal and thereby processes both overtones as well as a signal’s phase structure.

The processing of the phase structure influences the moments of acoustic perception and occurs in microsecond time divisions – it has to do nothing with the cancellations one associates with 180-degree signal shifts. A decisive factor in resultant tonal quality is the alignment of level relationships in the overtone spectrum. Such overtone “enrichment” does not operate on the generator principle of exciters (wherein distortion is added to the original signal). The TwinTube harmonics control effects a rather a more equalized overtone structure resulting in a sound which in effect appears much more in the foreground, but without doing so through extreme level changes. Thus, for example, a voice appears immediate apart from the overall mixture, “sitting” clearly outlined in the mix’s foreground.

Each SPL plug-in provides the settings feature to save four different sets of adjustments. Much faster than the usual saving and recalling of presets, the last settings are stored automatically and can be 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.



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 adjustments with higher control resolution.

Power LED

With a click on the POWER LED you can turn the TwinTube on or off. The switch settings of HAR. ON and SAT. ON are stored so that the previous state is recalled when the TwinTube is activated with the POWER LED switch function. The POWER LED is illuminated when the plug-in is activated.



HAR. ON/SAT. ON

Activating HAR. ON engages the HARMONICS control. Likewise you engage SATURATION with the switch SAT. ON. When turned on, these switches illuminate. One of the both processing stages can be applied therefore respectively separately. Similarly you can process the signal with both stages at the same time.



HARMONICS Control

With the HARMONICS Control you can adjust the overtone processing intensity. The level range of a chosen center frequency (see “HARMONICS Switches” on page 8) lies between 0 and 15 dB. Overtones are marked also as “Harmonics”. The HARMONICS control results in an enrichment of the overtone range for a chosen fundamental tone (see “Introduction” on page 5 and 6). The tonal result is an intensification of the presence that produces a fresher, silky and more brilliant aural image. Similarly, the signal’s spatial qualities gain intensity.



Control Elements



HARMONICS Switches

With the HARMONICS switches you choose the frequency range of the fundamental tone area that should be processed with the HARMONICS control. There are four available frequency ranges. For reasons of space, we have rounded frequency values for the front lettering.

Filter 1:

Center Frequency: 9,8kHz, Bandwidth: 9.6 kHz, Max. Gain: +15 dB

Filter 2:

Center Frequency: 6.6kHz, Bandwidth: 5 kHz, Max. Gain: +15 dB

Filter 3:

Center Frequency: 2.8kHz, Bandwidth: 9 kHz, Max. Gain: +15 dB

Filter 4:

Center Frequency: 1.9kHz, Bandwidth: 4.7 kHz, Max Gain: +15 dB

The frequency ranges are based upon our experiences and test series to offer ideal processing ranges for a wide variety of instruments (and vocals of course). You may find further information under „Applications” on page 10.



SATURATION Control

As the name implies, the SATURATION control determines the degree of the tube saturation. At the most extreme level this SATURATION control output level may increase the overall output level by approximately 6 dB.

The SATURATION control offers a wide range of effects intensity from most subtle to brutal harmonic distortion. Aside from harmonic tube distortion, the accompanying tube limiting effect should also be considered. For further details on the saturation effect refer to the “Introduction” on page 5 and 6.

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 TwinTube 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. Whether 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. Reduce the input level or processing values if the OVL-LEDs keeps flashing.



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 recall 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.

Applications

Here we refer to only two significant examples, of course without suggesting completeness. We would like to simplify starting with the TwinTube by sharing some thoughts and experiences. The effects and results described here can be applied to many other instruments—nothing should keep you away from using the TwinTube without restriction.

Vocals

Optimizing vocal tracks is a highlight among the processing applications of the TwinTube. Often further EQing is not necessary anymore in order to lift a voice from a mix and get it up front. A recommendation for female voices: HARMONICS switch to 6, HARMONICS control to about 2 o'clock, SATURATION to about 12 o'clock.

With these settings the described effect should be clearly audible and from here individual tracks can be optimized. With female voices we suggest trying HARMONICS switch settings 6 and 10 while switching between 2, 3, and 6 with male voices.

Acoustic Guitars

The success in treating e-guitars depends on previous recording and processing gear and techniques—if tube amps and further effects were already applied, it is hard to foresee how much the TwinTube can contribute when optimizing or designing a sound.

In contrast to e-guitars, there is a huge potential in processing acoustical guitar tracks. Picking sounds can be intensified, in general tube saturation and limiting can improve loudness and condenses the sound. Presence is emphasized and the instrument cuts through a mix much better without raising levels too much. A well chosen amount of harmonic distortion always adds some roughness which may often be a nice touch in several playing styles.

TwinTube

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Manual

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