



## Classic & Dual-Band De-Essers

## **Classic & Dual-Band De-Essers, Analog Code® Plug-ins**

Model # 1230

Manual version 1.2 – 9/2012

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# Installation

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## Plugin Alliance Activation

Your Analog Code plug-in must be activated in your Plugin Alliance account. You can set it up and log into your account anytime at <http://www.plugin-alliance.com>

For details about the activation process, read the Plugin Alliance Activation Manual. The PDF file is stored in the same folder of your computer like this product manual file.

Alternatively, the following web page provides the same information: <http://www.plugin-alliance.com/activation>

## System Requirements and Compatibility

For details about system requirements and supported platforms or formats visit <http://www.plugin-alliance.com/compatibility>

## MAC and Windows Installation

Check for the latest plug-in software version before installation: <http://software.spl.info/download>

Execute the installer file and follow the instructions.



## Glossary

Host programm: program on which the plug-in is running (Pro Tools, Cubase, Logic, etc.).

M/S: Mid/Side; alternative stereo encoding to the left/right channel stereo format.



## SPL Analog Code® Plug-ins

While SPL hardware products have been fascinating audio professionals from home studio owners to mastering engineers in the world's most renowned facilities for years, the need for this technology in the form of plug-ins has also been an ever-growing demand. With the Analog Code plug-ins we have finally accomplished our much desired goal: to transfer to the digital domain the high quality we have striven to achieve with our analog processors throughout several decades.

The first time we ever heard a software that fulfilled our expectations, one of our hardware developers said to the programmers: “you have cracked the Analog Code” — thus was coined the name of our digital products.

## The Classic De-Esser



Back in the 1990's, we developed an alternative way to process signals in order to reduce sibilance based on phase cancellation. Unlike traditional compression methods, this procedure is much more unobtrusive and simplifies control to one single parameter. SPL's De-Esser quickly became a standard reference among recording studios, broadcast stations and live sound engineers.

The most commonly used technology to remove sibilance is based on compression. In addition to determining the threshold, the center frequency for processing must also be set. The processing range can be up to two octaves in order to effectively address all possible problems across the frequency spectrum. This results in one of the most critical disadvantages: the wide range of frequencies being processed leads to undesired effects such as nasalization and lisper.

The SPL De-Esser works on the principle of phase cancellation to remove unwanted sounds. And it also adds automatic sibilance detection, which allows processing to be limited only to the range where sibilant sounds are present. The result is a neutral-sounding, unnoticeable but highly effective processing that never requires fine tuning level and frequency settings. This way de-essing has the least possible influence on the voice's timbre, avoiding side effects like nasalization and lisper. Operation is limited to adjusting the processing intensity with one single control. The SPL De-Esser is a safe and precise tool to solve sibilance problems, without having to compromise sound quality nor the hassle of permanently readjusting settings.

## The Dual-Band De-Esser

The Dual-Band De-Esser module expands on this concept by making use of two frequency bands that can be used independently or jointly.

- Two de-esser stages increase processing effectiveness without introducing any audible artifacts
- Focused processing with high and low bands



## Common Special Features

- **AUTO THRESHOLD:** Input signals are automatically adjusted so that processing is uniform, regardless of the distance between source and microphone. Auto Threshold can be switched in at the Classic De-Esser, for the Dual-Band De-Esser it is permanently activated.
- Male/Female modes that adapt processing in the lower band to male or female voices (only on Low Band at the Dual-Band De-Esser).
- The M/S mode allows for precise de-essing of a full mix. Process vocals in the mid signal but keep all the high frequencies of cymbals, guitars or keyboards in the side signal untouched. M/S mode makes the Analog Code De-Esser collection to your best choice for mastering applications.

## Mouse wheel control for all rotary knobs

All SPL Analog Code plug-ins support mouse wheel control for rotary controls and faders. Place the mouse cursor over a rotary control and move the scroll wheel of your mouse to adjust the setting. Fine control is activated by pressing platform-specific keys additionally.

## Keyboard Shortcuts

All SPL Analog Code plug-ins support format and OS specific functions for value reset, fine adjustment and mouse control. For more detailed information please refer to the host program's documentation.

## Mono, stereo or multi-channel operation

The plug-in can be used either for mono or stereo operation. You can also use it as a „Multi-Mono“ or multi-channel plug-in, as long as your host program supports this function.

## Classic De-Esser: Control Elements



### Active

With the ACTIVE switch you turn the Classic De-Esser on or off. It is active when the switch is illuminated. The main purpose for ACTIVE is an A/B comparison of processed and unprocessed signals. We recommend to regularly do so: the processing is very unobtrusive. Therefore, regular A/B comparison avoids over-processed results.

# Classic De-Esser: Control Elements

## S-Reduction

Use the S-REDUCTION control to adjust the intensity of the sibilance reduction. The center frequency for sibilance recognition is set at 7.2 kHz in FEMALE mode and 6.4 kHz in MALE mode. For more information, please refer to section „MALE/FEMALE“ on page 10.



Scale values for the filter are displayed in dB. The actual reduction values, i.e. after phase cancellation, are shown in the S-Reduction display.

When the control is set to 3 dB, actual reduction might only be of around -1 dB because the sibilance reduction does not reduce overall signal level in the same way.

In practice, for most applications, the best results are usually achieved when S-REDUCTION is set between 3 and 7.

## S-Reduction Display

The S-Reduction display shows actual, overall reduction levels after phase cancellation. Values range from -20 dB to -2 dB.



## Auto Threshold

AUTO THRESHOLD automatically readjusts the threshold when the input gain varies due to varying distances of the speaker to the microphone. The de-essing remains on a constant level when AUTO THRESHOLD is activated.



De-Essers operating with common compressor technology change their de-essing intensity with varying input levels. AUTO THRESHOLD gets rid of all these problems. No matter how much the input level varies, the de-essing is proportionally the same.

# Classic De-Esser: Control Elements

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## Male/Female

The MALE/FEMALE button allows you to adjust the low-band de-esser to the type of voice being processed. When engaged, the mode selected for the low-band de-esser is FEMALE, otherwise the de-esser works in MALE mode. The mode selected affects the center frequency for sibilance recognition: in FEMALE mode it is set at 7.2 kHz, while in MALE mode it is set at 6.4 kHz.

These values have been determined by practical experience, so that the processor adapts better to gender. Nevertheless, you cannot take for granted that these settings will suit every single male and female voice. Consider the MALE/FEMALE function as an additional tool to help you set the low-band de-esser more precisely according to your needs. Always trust your ears to find the best settings.



## Settings A and B

The two SETTINGS buttons allow you to save settings with a simple mouse click. As soon as you click on another SETTINGS button, the current settings are saved under the previously active preset. For example: In the image shown here, all parameters would be saved under preset "A" if you were to click on button „B“.

Any previously saved preset can be recalled with a simple mouse click on the corresponding button; you can then use or edit the settings. If the host program allows it, the presets can also be automated so you can use different settings at different points. As long as you work in a specific session of the host program and the plug-in is installed, the settings are saved and can be recalled afterwards. When opened, the plug-in loads the active preset settings instead of the default settings. If you remove the plug-in from the host program all presets are lost. To erase all presets at once you can remove the plug-in from the host program and then reinstall it.

# Classic De-Esser: Control Elements

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## M/S Switches

With these switches you activate the M/S mode. Press one of them in order to work in this channel only – either Mid or Side signals. Press both switches in order to process the whole stereo information on both M/S channels. If you do not press a switch, the plug-in works in regular L/R stereo mode.



M/S encoding is only used for processing; decoding into L/R format is done before the signal is output. Note that both encoding and decoding is lossless.

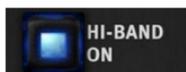
## The M/S Stereo Format

As an alternative to L/R encoded stereo signals, there is one technique that is particularly useful for signal processing in music production: M/S. “M” stands for Middle (or Mid) and “S” for Side, which means that signals are separated from the middle to the sides, instead of from left to right.

## M/S De-Essing

Applying De-Esser processing to M/S encoded signals can be extremely beneficial in mastering and for summed or complex signals. Working only on mid or side information can give you more targeted access to problematic signal portions than in L/R stereo mode. Reducing sibilance in lead vocals of a stereo mix can be much more efficient if de-essing is applied only to the mid information of a mix. In contrast, it may be wise to process side information only when ambient parts require some de-essing (choirs, drum overheads ...).

# Dual-Band De-Esser: Control Elements



## Hi Band On, Low Band On

Use the HI-BAND ON button to turn the HIGH-S-REDUCTION on or off. Use the LOW-BAND ON button to turn the LOW-S-REDUCTION on or off. The buttons light up when engaged. You can use the two processing stages separately or jointly.



They are connected in series as independent de-esser modules. The low-band de-esser is set first in the chain.

If both de-essers are engaged, there is interaction between them: a signal already processed with the low-band de-esser is different from the raw material that the high-band de-esser would otherwise process. That is the reason why the readings of the high band's SR LEDs change when the low-band de-esser is engaged while the high-band processor is active.



## Low S-Reduction

Use the LOW S-REDUCTION control to adjust the intensity of the sibilance reduction in the lower frequency range. The center frequency for sibilance recognition is set at 7.6 kHz in FEMALE mode and 6.4 kHz in MALE mode. For more information, please refer to section „MALE/FEMALE“ on page 9. The bandwidth of the low-band de-esser is 1.44 kHz.



Scale values for the filter are displayed in dB. The actual reduction values, i.e. after phase cancellation, are displayed in the lower SR LEDs. Thus, when the control is set to 3 dB, actual reduction might only be of around 1 dB. The SR LEDs display sibilance reduction between -1 dB and -14 dB, first in 1 dB increments and from 6 dB on in 2 dB increments.

In practice, for most applications, the best results are usually achieved when LOW S-REDUCTION is set between 3 and 7.

# Dual-Band De-Esser: Control Elements

## High S-Reduction

Use the HIGH S-REDUCTION control to adjust the intensity of the sibilance reduction in the upper frequency range. The center frequency for sibilance recognition is set at 11.2 kHz with a 3 kHz bandwidth.



Scale values for the filter are displayed in dB. The actual reduction values, i.e. after phase cancellation, are displayed in the upper SR LEDs. Thus, when the control is set to 3 dB, actual reduction might only be of around 1 dB. The SR LEDs display sibilance reduction between -1 dB and -14 dB, first in 1 dB increments and from 6 dB on in 2 dB increments. Please note that the MALE/FEMALE button has no effect on the high-band de-esser.



In practice, for most applications, the best results are usually achieved when HIGH S-REDUCTION is set between 3 and 7.

## Male/Female

The MALE/FEMALE button allows you to adjust the low-band de-esser to the type of voice being processed. When engaged, the mode selected for the low-band de-esser is FEMALE, otherwise the de-esser works in MALE mode. The mode selected affects the center frequency for sibilance recognition: in FEMALE mode it is set at 7.6 kHz, while in MALE mode it is set at 6.4 kHz.



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# Dual-Band De-Esser: Control Elements

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## Signal LED (SIG.)

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 running the plug-in contains a signal that is loud enough to ensure correct processing.



## Overload LED (OVL)

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 keep flashing.



## Settings A and B

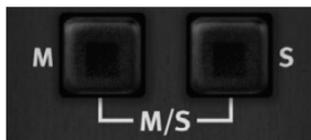
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## SPL Analog Code® Plug-ins

### Manual

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