

BY RUSS LONG

Jeremy Ramsey from Rack & Roll Audio in Nashville turned me on to the SPL Transient Designer 4 Model 9842 (\$1,349) a couple of years ago and I've been hooked ever since. I bought the four-channel version and I routinely compliment it with a second four-channel unit during tracking sessions. The Transient Designer provides the ability to increase or decrease the attack of a sound source and to extend or shorten its sustain. The box actually makes it possible to shape the dynamic path of a signal practically giving you the ability to change the microphone distance and position after the recording has been made. It accomplishes this using Differential Envelope Technology (DET) which offers a new way to provide the independent level shaping of the dynamic response of a sound.

FEATURES

The 1U Transient Designer 4 measures 19 inches x 1.7 inches x 9.3 inches and weighs 7.5 pounds. The box has four female and four male XLR connectors for input and output. The input impedance is 22 kohm and the output impedance is less than 600 ohms. The unit's nominal input level is +6 dB with a maximum input level of +24 dBu and a maximum output level of +22.4 dBu. The box has a frequency response of 20 Hz-100 kHz with a maximum load of 600 ohms and a total harmonic distortion of 0.01% @ 1 kHz. The unit accepts a standard IEC power cable and is switchable

SPL Transient Designer 4 Model 9842 Processor



between 115 and 230 volts.

DET is the first analog solution for the level-independent shaping of envelopes allowing transients to be accelerated or slowed down and sustain prolonged or shortened. The Transient Designer has only two controls, Attack and Sustain, essentially deeming traditional dynamics controls such as threshold, ratio and gain

controlled by the same side chain voltage so as to maintain a coherent and stable stereo image. When operating in link mode, the control elements of the odd channel (Channel 1 or 3) control the pair.

To assure impeccable signal quality, SPL developed a hybrid-component balanced input/output stage using all laser-trimmed resistors with a tolerance of

The Transient Designer Model 9842 has earned its place on the short list of modern day classics. The box provides simple control of the attack and sustain of a signal in a very easy way.

unnecessary. The Transient Designer's internal processing is highly developed, so that while the processing going on inside the box may be very complex, the user only has to deal with these two intuitive controls. The degree of dynamic processing required to do this couldn't be duplicated even using a chain of several conventional compressors, yet only two controls per channel are required to allow the user 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. All of the necessary time constants (attack, decay and release) are set automatically in a musical fashion according to the input signal's characteristics providing quick and natural sounding results.

For stereo operation the link function connects channel pairs in an odd/even configuration (Channels 1 and 2 and/or 3 and 4). The linked channels are con-

0.01%. The result is a CCMR (common mode rejection) that is better than -80dB at 1 kHz.

IN USE

Although the Transient Designer is a particularly powerful device, I found it to be exceptionally intuitive to use. Turning the Attack knob increases or decreases the level of the signal's transient and turning the Sustain knob increases or decreases the sustained portion of the sound. That's pretty much all there is to it. Pressing the channel's On button activates the processor and illuminates a red status LED inset in the button. When the On button is switched out, a hard-bypass relay circuit is engaged. This circuit engages automatically if the unit loses power making the box perfectly suited for sound reinforcement situations. Each channel also has a "Sig" (signal present) LED that illuminates when the input signal exceeds -40 dBu.

Fast Facts

- **Applications:**
Studio, broadcast, post production, sound reinforcement
- **Key Features:**
Four-channel; attack, sustain controls; link mode; bypass
- **Price:**
\$1,349
- **Contact:**
SPL USA/Network Pro Marketing at 805-241-5140, www.SPL-usa.com.

The Transient Designer's forte is no doubt drums and percussion. I have spent hours with the box effortlessly shortening or lengthening the attack of all kinds of percussive signals with no negative sonic artifacts whatsoever. It works well with kick drum, snare drum, toms, congas, bongos, etc. I found that it is almost like being able to change the amount of drum damping after the recording has taken place. I had good results emphasizing the attack of a loop to increase the energy and aggression of the loop in the mix. I found that using the box on snare and toms when mixing, is like being able to return to the tracking session and change the amount of drum damping. If the drums were recorded in a room that was too ambient, the Transient Designer can shorten the room's decay time in a very musical way or during tracking the snare, toms, or overheads can be shortened without being physically dampened.

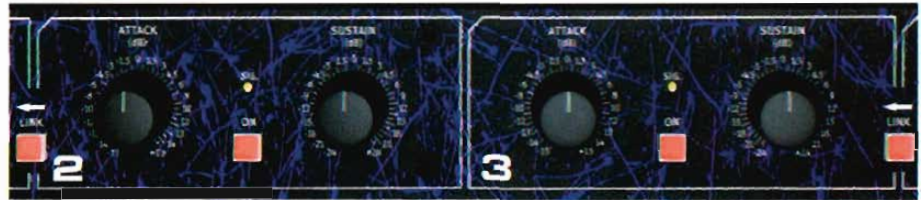
I was able to get the same results with practically every other instrument I used it on including acoustic guitar to get a mellower, rounder, more relaxed sound, on piano to decrease the ambience and on upright bass to add attack and in every case had positive results.

I've found that by increasing the attack and decreasing the sustain, instruments can be moved more to the front of the mix without being turned up. This works exceptionally well for percussion sounds that need increased clarity but need to remain low in the mix. I've also had some good results using it on acoustic guitar with the same approach.

Using the box to add attack to a bed of highly distorted electric guitars was amazingly able to bring out some clarity in the individual notes. While mixing a track that included a stereo choir (that was recorded in an overly ambient hall) I found that turning down the sustain provided an intelligibility that I wasn't able to attain through any other means.

SUMMARY

The Transient Designer Model 9842 has earned its place on the short list of modern day classics. The box provides the simple control of the attack and sustain of a signal in a very easy way. Unlike traditional compressors, the Transient Designer's processing is not governed by the signal level but rather by its dynamic characteristics, so all signals



(loud and soft) are processed equally.

Russ Long, a Nashville-based producer/engineer, owns The Carport recording studio. He is a regular contributor to Pro Audio Review.

Review Setup:

Apple 2 GHz Dual Processor G5 w/2 GB RAM; Digidesign Pro Tools 7.1; Lucid Gen-X-96 clock; PMC AML-1 monitors.