MIX
MUSIC PRODUCTION • LIVE SOUND • SOUND FOR PICTURE

MixDream – Testbericht Mix Magazin

Testbericht in Mix Magazine (US): SPL MixDream Summing System – 16×2 Class-A Mixer With Dynamics Processing

Von Barry Rudolph

Sound Performance Lab (SPL), famous for its unique vision of analog signal processing gear including the MMC1 Mastering Console, PQ Mastering Equalizer, Transient Designer and Vitalizer units, has released the 16-channel MixDream Model 2384.

With its advanced design

and novel insertion and signal routing features, MixDream separates itself from all other summing units by refining the process with more user options, maximum control and two built-in stereo processors: an expander and peak limiter.

The 2U MixDream is a 16-channel X 2 system that uses Class-A, electronically balanced, differential input amplifiers running on a +/-30-volt supply. All switching is done using Matsushita SDS/NAIS gold-plated, gas-filled and vacuum-sealed relays. Each input channel has a switchable insert, and multiple MixDreams can be linked together for more inputs or for 6-channel surround sound applications. No amplifier chips (ICs) are used, rather SPL's own op-amp modules enable the MixDream to deliver 127dB dynamic range and 96dB S/N with all channels on. The entire signal path is DC-coupled with no electrolytic capacitors used except in the internal linear power supply. SPL also makes the MixDream XP Model 2591, a simplified version that uses the same circuit topology and high voltage design and is surround linkable but comes without inserts, Lundahl output transformers, peak limiter and stereo expander features.

Summing It All Up

MixDream is organized so that odd-numbered channels are bused to the left side and even-numbered channels to right. All connections to these channels as well as channel insert send and returns, direct outs and master inserts and expansion I/O use D-Sub (DB25s) connectors following the Tascam standard pin-out.

Each channel insert toggle switch has three positions: Off (no insert), On (insert path active) and No Mix, where the

channel is lifted from the stereo summing bus and routed to its own direct out. Besides muting that channel to the mix, No Mix allows for routing channel audio to a processor and back into your DAW for re-recording/mixing. No Mix is also good for routing click tracks, SMPTE and production sound, such as dialog, to separate destinations. When fully integrated into your studio's patchbay, MixDream acts as a clean DAW analog buffer amp and I/O router, saving time and patching when specialized session needs arise.

Each channel's signal present LED (-30dB level) indicates input signal when the insert switch is Off; when On, it indicates that signal is coming back on the insert return. It's a simple idea, but a clever way to verify an outboard signal chain is working. Two more LEDs indicate an active insert (orange) and No Mix mode (red). The global inserts On/Off switch activates all 16 channel inserts together for checking (or troubleshooting) all inserted gear on the mix. MixDream has mono switches for channel pairs 1-2, 3-4 and 5-6, forcing them to the center of the stereo bus.

Summed stereo audio goes directly to the master insert control section where an Elma rotary switch controls the master insert send level from -6 dB to +4 dB. There is plenty of level here—as much as +28 dB—if you'd like to overdrive a tube compressor for "that sound." Two –30dB signal present LEDs light up with level comes back from the inserted unit; In/Out hard relay bypass is provided for quick A/Bs.

The Stereo Expander uses another Elma 6-position rotary switch that controls the amount of a phase shuffler–type effect that widens the image of stereo material, taking left and right signals and adding them back to the opposite side in reverse phase. This is a cool effect that I found fairly mono-compatible, but I wish that it were also available, switchable or patchable, to any stereo pair of channels rather than just to the whole mix.

The Stereo Peak Limiter uses a diode/transistor combination and reduces only peaks. It worked well at minimal settings to prevent the clipping of any A/D converter following the unit, but avoid heavier settings as transients will be rounded off. There is no way to adjust its action and only a pair of LEDs to indicate gain reduction.

Both the main and monitor outputs are the same, but are presented on two sets of rear-panel XLR connectors controlled by a single rotary switch. A switch gives the option of using Lundahl LL1539 transformers or not. I preferred the sound of the Lundahls; the following processors or A/D converters may require the additional isolation.

In the Mix

All of my music mixes benefit greatly when summed in analog—I became a true believer the very first time I mixed separate outputs from a DAW on a large API console. After carefully testing all 16 channels with a -18dB reference tone from a Pro Tools|Mix Plus system, I found that all channels contributed exactly the same level to the summing bus—an astonishing +/- 0.2dB.

The beauty of this unit is evident in that stereo localization and imaging are more solid with spatial cues locked in place. There is less smearing, and the increased clarity of low-level information—such as room ambience, reverb tails, and subtle effects—is very noticeable. Subtle mix moves made in the DAW are more audible, and I liked the uncolored transparent sound of the MixDream—you cannot overload this unit.

What's the Buzz?

Careful Class-A circuit design, an extremely high headroom and a low noisefloor pay off big when it comes to summing analog signals—and the SPL MixDream offers all this and more. So far, I've used three different summing systems with DAWs and I've noticed the biggest sonic improvement yet while using the MixDream. If you're joining the fast-growing analog summing crowd, you'll be well represented using either the MixDream or the MixDream XP.

Barry Rudolph is an L.A.-based recording engineer.

Visit his Website at www.barryrudolph.com.