Neotek É LAN II Multimedia Console

by Barry Rudolph

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The new Neotek É lan II console offers performance and features comparable to the company's top-of-the-line É lite, but in a scaled-down design, enabling studio owners to offer the next level of service above and beyond the eight-bus/MDM/home/project studio. The Neotek É lan's sound, feel and performance are professional in every way, yet the console is priced to fit within the budget of a growing studio business--MSRPs start way under $30K for a 32-channel complete system. In the two studios I visited, both the É lan consoles worked flawlessly. Their operation was quiet and sound was punchy, largely due to the use of discrete circuitry in critical signal paths and good, solid engineering practices in the overall design. My personal experience with both the É lite and É lan consoles dates back a few years and countless sessions on the original, Chicago-built consoles with wood frames and great sound. The new boards represent much-improved component quality and manufacturing refinements and a re-commitment to high engineering standards in the production of this cost-effective and impressive mixing system.

To begin, the new É lan occupies a substantial, all-alloy frame with integral legs available in black or white color schemes. The input modules are housed in alloy extrusions and are elevated and slightly angled relative to the fader modules. A beveled frame member between the two sections offers a surface for writing track/mic layouts. The É lan frame selection is 16, 24, 32, 48, 56 or 64 channel inputs, and it shares the É lite's interconnect system design. An extra blank panel is included in all frame sizes, and consoles may be ordered with more. Since Neotek is a custom console manufacturer, custom modules can be added later, making the É lan more future-proof than non-modular consoles.

The É lan is an in-line monitoring, "American" style console with 24 balanced multitrack buses, balanced inputs and balanced stereo bus outputs. A TT Bantam all-metal patchbay includes one complete row for outboard gear. There are 40-LED segment bar graph meters for each of the 24 buses and both standard VU meters and bar graph for the stereo mix

output. There is a global peak/VU changeover switch for all the meters as well as individual touch-sensitive switches located on each meter.

The É lan uses the same microphone preamp section as the É lite, a discrete transistor DC servo amplifier circuit--no problematic electrolytic capacitors, and you are not going to get the same sound as everybody else these days recording with an IC chip mic stage. Gain range is from +20 dB to +60 dB, and there are -20dB pad, phase flip and 48-volt phantom switches. Neotek says that the noise floor of the mic pre is within 1/4 dB of the theoretical minimum. A small LED clip indicator signifies +16dB clip level. A switchable highpass filter offers a fixed 80Hz corner frequency and a 12dB/octave slope. A switchable -6dB line-level pad is provided to compensate for super-hot digital tape levels that may overload successive stages, especially when under massive EQ boost. There is no line-level trim pot.

The in-line design allows both the channel fader inputs and the monitor inputs to be used as mix inputs, thereby doubling the number of inputs. Normally, the board is operated so that the main faders control the microphone inputs, post-EQ, and the monitor pots affect the multitrack tape playback levels. Using the Rev button flips or reverses the fader with monitor. So if you work with a producer who likes to fiddle while you track, you can set the board up so that the monitor knobs send mic inputs direct to tape; the producer may then mix monitors on the faders without affecting Record levels. The monitor path can also "follow" the fader source; during mixdowns, 24 extra effect send paths are available from the 24 recording buses. This is in addition to the regular four mono sends and the single, stereo Send A-B control.

All four of the mono sends are either pre- or post-fader, but are only selectable in pairs--sends 1 and 2 may be either pre- or post-; similarly, sends 3 and 4. Send A-B has a level, panpot and pre/post switch, making it usable as a cue mix or stereo effects send. All the send controls follow the monitor pot, in either pre- or post- modes, when the Fader switch is de-selected. There isn't a Mix to Headphones switch on this console, though the stereo bus output could be patched to the cue amp input in the patchbay. In this configuration, the cue volume would be dependent on the stereo mix level, and in most cases you would have to lower the stereo master fader or lower the input gain at the headphone amp. It would be worthwhile to add a Mix to Headphones path with level control.

Below the effect send section on the input module is the 4-band, semi-parametric equalizer. Again, in the É lan Neotek has used the same proven equalizer as in the É lite; the only differences are that the high and low frequency bands are shelving only, whereas they are switchable to bell-shaped in the É lite. Also, the É lite's two mid-band sections have a choice between two Q shapes. The two mid-band EQs in the É lan use separate stages to avoid interaction, and the fixed Q is a little wider than one octave. All boost/cut controls have solid detents, and an option allows the mid-band EQ to be split off to the monitor path. I found the equalizer very musical both when aggressively torquing a dull snare drum track and when applying a subtle, touch-up EQ to stereo program. There was no extra noise, muddiness or stridency in either case.

Below the equalizer on the input strip are the monitor level with panpot, and the fader panpot. Panning can be effected across any two odd/even recording buses with the monitor panpot or the fader panpot, depending on the status of the Rev switch. The panpots have easily

detected center detents. The main faders are 100mm Penny & Giles conductive plastic, and, since they are in a separate module, Neotek can install any fader or automation system as an option. There are three mute groups with the option for more. The mute circuit uses a ramped discrete FET design and is more reliable and better-sounding than a CMOS chip. You can design mute groups and in-place solo schemes on designated mute groups. MIDI direct mute automation is another option.

The Master section of the console requires only minimum explanation for the novice. The oscillator offers fixed frequencies of 100 Hz, 1 kHz and 10 kHz, and there are Level Adjust, Tones and Slate routing controls. I think the Slate button would be better located adjacent to the talkback button down at the bottom of the panel, and the main talkback button should be bigger with a light--it looks no different than the pre/post switches. As one of the most overused buttons in the studio, it ought to be easy to find. Below the Talkback Level control, the Meters section allows the user to route the stereo VU meters to read: monitors; aux 1&2; aux 3&4; aux A-B; or Mult L, R (an external, patchable stereo source). The Studio Speakers controls offer level and on/off, and one can also select either the control room's audio or Send A-B as a source. I would like to see a flashing LED when studio speakers are on! The Control Room Level is a precise and solid-feeling detented pot that adjusts volume (what else!) from four different sources: Mix L/R, Tape 1, Tape 2 and Extra. The extra feed is a patchable stereo point on the patchbay, but it can also come from another Neotek option called the 12-way Line Selector panel. I recommend this one-space panel to ease playback from cassette decks, DATS, turntables, analog decks, CD players, VCR's, TV, Jacuzzi, etc.

Effects send masters are on the left side of the Master Section and include six auxiliary send controls along with solo buttons. There are also two Direct Stereo inputs, with both solo and on/off buttons. These are used for stereo effect returns and are single knobs without a left/right balance control. These two stereo inputs do not feed the aux sends. If you want effects to appear in a headphone mix, you will have to use fader inputs for all effect returns and then send them to the cue mix.

There are two different solos on the É lan: PFL (Pre-Fade Listen) and In-Place. In-Place or mix solo is available only on faders. PFL works on faders, aux sends and monitors. There is an interesting Solo Lockout button that releases solo. If you have a drum mix going in a solo group, you can quickly "release" the solo group with this one button rather than hunting down all the individual solo buttons.

Neotek has added the Multimedia Module to its list of available options for the É lan. The Multimedia module provides a complete multichannel monitoring system for any Neotek console. Essentially, the module provides a low-cost system for multichannel monitoring in mono, stereo, LCRS, 5.1, and 6-channel surround. This is done by routing the multitrack and the stereo buses used to record 5.1, LCRS or 6-channel to the appropriate speakers. Furthermore, the Multimedia module allows monitoring of the audio quality before and after insertion of a DS-4 or SEU-4/SDU-4 or data reduction processes. Since the module provides an encode/decode insertion point for whatever data reduction or encode system you desire, you can monitor quality before encode, after encode but before decode (if someone was to play it without decoding) and of course, after decode. The module also allows you to "collapse" any surround mix down to stereo, or even mono, to check for compatibility. The

speaker selection logic automatically determines how you want to monitor by your speaker choice. So if you select the stereo near-fields you will hear your surround mix folded to stereo. Switch again to the mono television speaker and you'll hear how it will sound on a small, cheap TV. Other features important for this work are individual speaker mutes for tracking and dealing with encode-decode artifacts heard on a specific speaker; switchable lowpass filter to the subwoofer channel; and quad panner output bus assign for an optional joystick or other surround effect generators.

I would like to thank Bob Heiber and Barry Goldberg at Chace Productions in Burbank for letting me come in and interrupt their surround mix session.

Neotek, distributed by Martinsound, 1151 W. Valley Blvd., Alhambra, CA 91803; 818/281-3555; fax 818/284-3092.

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