



Élite

The Neotek Élite console series is designed for the variety of challenges you face in today's professional audio environments. Whether you are involved in music recording, broadcasting, post production, or combinations of these, the Élite meets your needs for flexibility, performance, and unbeatable audio quality.

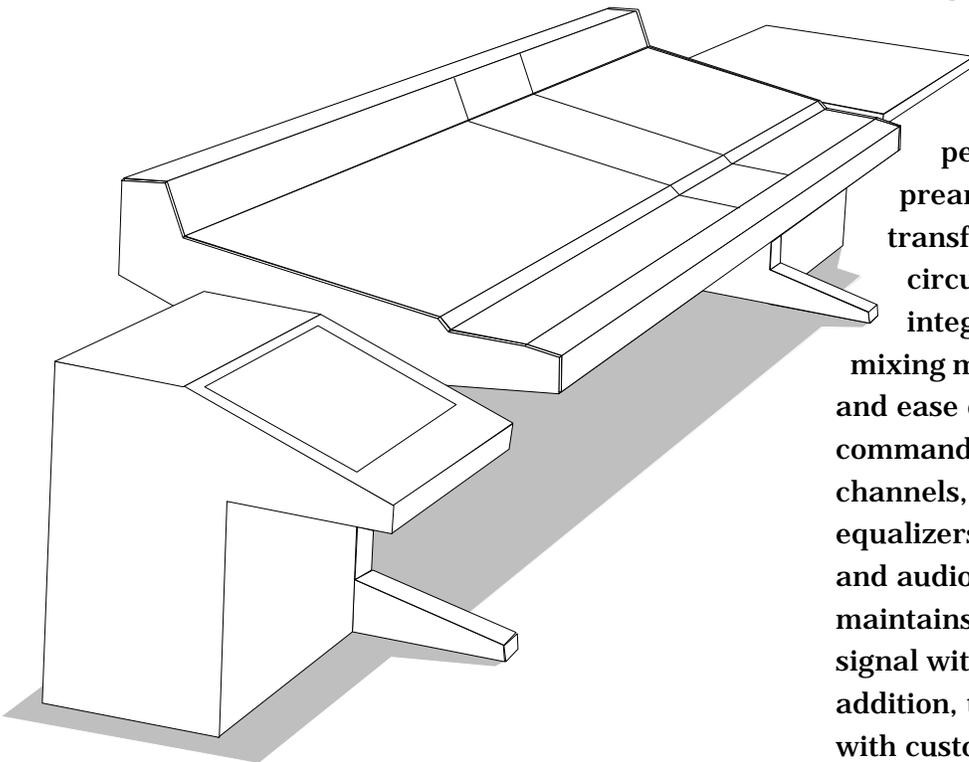
Overview

Neotek Élite consoles provide contemporary multipurpose studios with outstanding flexibility, superlative sonic performance, and ordering options which allow each console to be configured for maximum produc-

tivity in its specific working environment. The

Élite offers audiophile performance microphone preamplifiers and completely transformerless, high speed circuit design for exceptional integrity when tracking. In

mixing mode, engineering creativity and ease of use is maximized by full command of a large number of input channels, the availability of powerful equalizers, comprehensive routing, and audio system integrity that maintains the subtle qualities of each signal within a complex mix. In addition, the Élite can be ordered with custom options that adapt it to leading edge broadcast production and post production applications.





Product Summary

Élite

Consoles for Multitrack Recording, Post Production, and Broadcast

The Élite has been designed specifically so that it can be configured to offer maximum productivity in widely different applications. Three principals support this capability: Outstanding sonic and technical performance. An innovative and flexible architecture. And Neotek's unique ability to configure and customize its consoles for each user's specific application.

Our engineers began with the obsession for audiophile performance that has made Neotek consoles the standard of audio quality around the world. The consequence of this performance is superb technical specifications, a quality which is strictly adhered to not only in standard Élites but also when extensive customization is required. The design techniques that make an Élite sound so good in an air conditioned control room also mean that a custom Élite mounted in a truck will be free of noise and radio frequency interference. Every Élite will reliably produce Neotek's clear, clean sound and will continue to do so for many years.

Neotek introduced Dual Channel signal architecture in the Élite. It has since become the standard for high end console design. Our care in the design of signal flow in the Élite means that the features which allow a music recording engineer artistic control of a complex mixdown also allow a broadcaster to easily create subgroups, mix minuses, and simultaneous multitrack recordings. We have devoted our full attention to human factors in the design of the Élite; its extensive facilities are easy to understand and they respond harmoniously to an operator's creative techniques.

Customization.

Neotek is unique among console manufacturers in our willingness and ability to customize our consoles. We have designed them so that customization results in a high performance console with affordability, prompt delivery, and the performance, reliability and serviceability you expect of a standard product. There are Élites for broadcasters, with special metering and input selection. Film Élites, with recorder controls and multichannel monitoring. And Élites for music facilities with integral digital workstations. Our sales procedures, manufacturing responsiveness, our products, and even the methods we have developed to design them are focused on meeting the unique requirements of each of our customers—we know they're the kind of users who look into every detail of consoles and listen carefully before they make the decision to buy.

Circuit performance.

We knew the Élite would have to achieve a standard of both technical and sonic performance that would be a significant improvement over existing consoles, including our own. It would need to exceed the toughest international standards including N-10 and Pflichtenhefte 3/5. The Élite is the only console near its price that meets these high standards.

In the Élite, we designed application specific hybrid circuits for the microphone preamplifiers, fader buffers, bus combining amps, and stereo master combining amps. The critical stereo master fader buffer is a servoed Class A all-discrete design. You won't find generic op amps or a 1-chip mic preamp; they don't have the performance we, and you, demand. We also developed a low noise bus system that rejects interference better than balanced summing systems. And you can be sure there are no polar capacitors in the Élite's audio pathways. We are the only console manufacturer to take this audiophile approach, but then our older designs set very high standards for the new Élite.

Proven results that you can hear for yourself.

We are proud that Neotek consoles are known for exceptional sonic performance, but others have said it best. A studio manager of CBS Records division of Sony said, "We listened to a number of desks including Trident, Amek, DDA, but to our ears nothing came close to the Neotek."

And in a review of console sonics published in *Sound Engineer and Producer*, thirty of London's top engineers compared the worlds best. The Élite came out on top overall and at the top of nearly every criterion. It was ahead of the Harrison Series 10 and the Neve VR, and far ahead of SSL and Trident—with Amek dead last. This blind comparison echos the opinions of critical engineers around the world. Everyone claims good sound; Neotek delivers.

Unmatched technical performance.

We at Neotek believe that outstanding specifications are the consequence, not the objective, of good design. Modern professional audio demands top performance. Digital media reveals every technical shortcoming. Dolby SR must be supported by a console with excellent sonic performance.

While we are pleased that the Élite offers typical technical measurements that are about as good as you can get, we pay particular attention to areas which don't appear on spec sheets but which affect console performance nevertheless. We make sure that mute and aux bus cutoff or crosstalk 'from anything to anywhere' will not constrain the flexibility that has been designed into the Élite.

These efforts are as important to live broadcasting as they are to mixing sound for picture. Every Neotek owner benefits from this careful attention to detail, whether our efforts are driven by sonic quality, technical specifications, or highest construction quality.

Signal flow architecture.

Modern audio production has become highly specialized and contemporary consoles must help operators function efficiently in widely divergent environments. To meet this requirement, the systems architecture of the Élite has taken a significant departure from designs of the past. It uses neither a split monitoring nor in-line monitoring I/O module approach, but can be thought of as two superimposed consoles. Each input module contains two distinct audio paths which may operate independently, in parallel, or in series. We refer to this unique approach as Dual Channel architecture, and the Élite introduced it first.

Two high quality audio paths.

The two audio paths in each Elite input module have virtually identical circuitry, allowing them to be used completely interchangeably. Each has its own solo, phase invert, and peak LED functions. One channel is controlled by a linear fader on the input module and is termed the Monitor channel. The other is controlled by a linear fader or automation system on a separate panel beneath the input module; we call it the Fader channel.

Each audio channel in an input module can independently select its input source from the microphone preamplifier, the line input, or from the module's multitrack bus output. If the same source is selected, the two channels operate in parallel. The Monitor channel can also select the Fader output as its own input. In this mode the two paths operate

in series and the Monitor channel serves as a master send to any of 32 buses for effects, or for control of sophisticated sub-group mixes.

Easy audio subgroups.

By providing the bus output as an input selection to either channel, either fader may conveniently serve as a subgroup master or for creating a stereo mix directly from console group outputs, as when no multitrack recorder is connected. The 26 multitrack buses have front panel gain controls to enhance their use as effects and subgroup buses.

A powerful four-band equalizer and filter.

The high pass filter, patchbay insert point, and four-band state variable equalizer may be independently assigned to either channel. For example, low frequencies can be removed from the output of a microphone with the high pass filter and the signal sent to a compressor in the insert point; the stereo mix signal could then be equalized without effecting the output to the multitrack. If one or more functions is assigned to both channels, the input signal will be split, or Y'd, between the two channels. There are five such points in the signal flow at which the input can be Y'd without the use of patch cords.

A second stereo bus and a more powerful fader reverse.

There are two possible outputs for signals from input channels: to the multitrack buses, which include a second stereo bus, or to the main stereo mix bus through the module's logic controlled mute function. A single switch reverses these two delegations, effectively doubling the number of configuration options. With two input channels having independent input and output selection, the result is a much more powerful and easily controlled system than ordinary 'fader reverse.'

Solid state muting circuits and a Common Sense bus system.

The main stereo mute function on the Élite uses a sophisticated voltage-mode discrete FET circuit driven by digital logic. Its ramped action is silent and its cutoff is comparable to quality reed relays. It far exceeds the sonic performance of typical CMOS switches. Since it actually removes muted inputs from the stereo bus, the stereo output noise drops as inputs are muted. Even so, the output noise with 24 inputs is less than -82dBu, or about 10dB (three times) better than claimed by consoles with balanced busing.

Mute Logic and Four-way Solo System.

The mute control logic provides for three mute groups as well as a local mode. Not only are there master group mute switches, but the in-place solo (destructive mute) can be selected to effect only certain groups. This allows inputs used as effects returns or subgroup masters to remain unmuted when another module is in-place soloed. If no master in-place group switches are selected, the input pan solo functions only as a standard stereo post fader monitor solo. In addition to the Fader and Monitor pre-fader solo functions, there is a master function labeled Solo Lockout. This cancels the solo logic, so that a group of soloed inputs, such as a chorus mix or a drum kit, can be taken in and out of solo with a single switch.

The power of the mute logic system can be enhanced by including it in the control system of external devices. Our simple Direct Digital Interface option connects input mutes and mute group masters to the gpi lines of video editors or the parallel logic lines of computers. MIDI Direct adds an internal microprocessor and MIDI-In/MIDI-Out jacks, allowing read, write, update, and even off-line editing and storage of console mute data by a MIDI/SMPTE sequencer or controller.

Flexible Auxiliary Bus functions.

There are six auxiliary bus sends on Élite input modules, switchable pre or post either fader. Two are a stereo pair intended primarily for headphone cue mixing. The console master section includes a small mixer that allows any of the six buses, the stereo mix, or a patched-in signal to comprise the actual cue output. When talkback to cue is used, the cue mix is dropped 20dB so the talkback microphone is more easily heard. This small mixer also allows combining auxiliary buses making it easy, for example, to have simultaneous pre and post fader sends to the same effects output. The signal architecture of Élite input modules allows the multitrack buses to be used in several ways as additional fully controllable effects buses while mixing, giving a total of 32 mono or 16 stereo effects buses.

Multitrack assignment, subgrouping, and stereo input modules

The Élite offers unique subgrouping power through the input module SUB 1-16 switch. This switch removes the output of the main pan control from the stereo mix so that it may be assigned instead to any of the first sixteen multitrack buses, giving eight stereo subgroups. The remaining ten multitrack buses may be used as effects buses for subgroups created in this manner, in addition to the six basic effects buses, which may have been committed by the time a decision is made to create a subgroup.

Subgroups may be returned to the stereo mix by selecting the bus output at appropriate input modules, but there is a more elegant means. Optional stereo input modules are wired so that their inputs are stereo pairs of multitrack buses when their SUBGROUP switch is selected. These modules also include a stereo/mono effects return function so that input modules are not occupied solely to return echo to subgroups. In addition to their use as subgroup masters, the stereo input modules are full-functioned stereo line input modules, with left-right trims, mono modes, stereo insert, four band EQ, auxiliary sends, and complete mute logic functions.

Master section functions.

The flexibility of the Élite input modules is complemented by an equally comprehensive master section. Front panel controls have been kept simple while subtleties are taken care of internally. This section contains the auxiliary and stereo bus masters, logic control functions, and four echo return channels. There are five balanced stereo line inputs to the control room and studio monitoring chains; complete slate, talkback, and alignment tone provisions; meter input selection switches and peak/VU controls; and three alternative speaker selection switches. The monitor level fader is a custom unit chosen for its sonic neutrality and precise stereo tracking.

Metering, patchbay, and I/O connections.

The Élite is provided with twenty-four 40-segment high resolution bargraph meters, dual bargraph meters for buses 25 and 26 and the stereo bus, and a pair of moving coil meters with accurate VU ballistics which can be switched to the stereo mix or other sources. The bargraph meters switch individually to peak or VU modes, with the peak mode sensitivity reduced 10dB to give resolution equivalent to 60 segments. The comprehensive patch bay is constructed with all metal long frame jacks and is wired with shielded cable. Audio connections to the console are made through ELCO/EDAC gold multipin connectors. Interface kits are sent to users in advance of console shipment. Commissioning the console requires very little time.

The Élite console frame is a bonded, all alloy design which offers uniquely modern styling and exceptional strength. Its design allows many configuration options, including integral digital workstations and equipment racks. Producer desks in many sizes are a standard option, as is a legless, shockmount frame version for mounting in trucks.

Automation.

The input module fader is of the Élite is located on a separate metal panel to facilitate fitting or retrofitting any popular computer control system, including disk based VCA systems and moving fader automation. Neotek offers VCA faders of enhanced performance for all automation systems. We have worked closely with the designers of Audiomate moving fader automation and offer an integrated system which exploits the full capability of both automation and console. For systems where MIDI mute automation is important, Neotek offers MIDI Direct as a powerful but inexpensive alternative to fader automation. We also offer a special fader module for broadcast applications which produces a fader start pulse, mutes studio or control room speakers when open, and accepts remote mute commands. Inquire about our editor interface systems, which puts Neotek faders under control of popular video editors.

Multichannel monitoring.

Neotek offers its new MultiFormat Monitor module as an option for all its consoles. This module, based on Neotek's extensive experience building the Encore and Essence consoles for film sound, provides a full set of features for monitoring in a multichannel environment—both LCRS and 5.1 channels. These new formats are increasingly important. Not only film soundtracks, but even albums are being produced in Dolby Stereo and DTS 4-channel formats, while 5.1 has been adopted as the standard for HDVT and the advanced layers of MPEG. Post production houses, broadcasters, and even jingle studios will need to know what they are doing in multi-channel environments. The Neotek MultiFormat Monitor module provides a complete system, including insertion of an encode-decode processor like a DS4; volume, mute, and dim for three speakers systems with up to six loudspeakers; and reference monitoring of encoded and mono-encoded signals. Plus, it's highly affordable.

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Neotek Corporation professional audio products are designed and manufactured in the United States by a team of designers, technicians, salespeople, and managers committed to excellence in everything we do. Since 1972 we have made every console to individual order. We work closely with our customers to provide the console that will give maximum performance and productivity in each installation. Call us and find out how easy it is to put all of our resources to work for you.



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