AUDIO HORIZONS

New Ideas In Professional Audio From Martinsound

Fall 1998

Do Surround Projects

by Craig Connally - Vice President

Craig conceived the Max line of products and is responsible for bringing MultiMAX to life.

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Products mentioned in this article:
Martinsound MulitMAX, Elite Neotek Console

Article summary:
Use your existing console for surround sound projects. The key is controlling LCRS, 7.1, 5.1 and other monitor setups using MultiMAX.

You would like to start mixing for DVD release, you don't want to be left behind, but how can you take on a DVD or 5.1 film project without spending a fortune on a costly upgrade? MultiMAX is the easy solution to your surround monitoring dilemma. MultiMAX adds the full spectrum of surround sound features to any console; it even adds advanced film-style features found only in dubbing theaters and on scoring stages. And MultiMAX will pay for itself with your first surround project. MultiMAX began as a redesign of the Neotek Multimedia Module, providing multichannel monitoring facilities for Neotek consoles.

We've added features to satisfy the requirements of professional post production, broadcast production and music recording facilities. MultiMAX now handles all current formats from mono to full bandwidth 8-channel systems. It handles downmixing and bass management. And every function is under microprocessor control for ease of setup and custom configuration. MultiMAX controls two front loudspeaker systems and two surround systems. This makes it easy to add satellite LCR speakers to your existing control room or switch between bipolar and directional surrounds. You can set up for stereo, 4-channel Dolby® ProLogic® Surround, or 5.1 systems including Dolby Digital AC-3, DTS®, and RSP® Circle Surround®. MultiMAX also handles 7.1-channel Sony SDDS® as well as 8-channel IMAX® and theme park systems. It lets you chose stereo nearfields or a small mono speaker, with automatic downmixing when needed.

With MultiMAX, checking for compatibility between formats is simple. You can insert any matrix encode-decode system or processor into your monitor chain with one switch.

MultiMAX graphics make complex setup decisions easy.

MultiMAX can be programmed for a variety of processors such as a DS4, SEU4+SDU4, or the complex DS4-E and CP65 combination-even a digital encode-decode system. MultiMAX will allow you to monitor 7.1 recordings as they would be heard on a 5.1 system and it downmixes a stereo output from all surround formats, with mix levels selected according to the AC-3 and MPEG standards.

Bass management is a feature exclusive to MultiMAX. If you don't have a dedicated subwoofer, MultiMAX lets you chose to send the LFE (Low Frequency Effects) channel into your full range L,R monitors. If you are using satellite speakers, you can use your main full range L,R speakers or your subwoofer for LFE. MultiMAX lets you switch its 80Hz low pass filter into the LFE audio path to simulate the filters in digital encoders.

Post production requires accurately calibrated monitors, so we have included a pink noise generator for full range monitors and a limited bandwidth version for limited bandwidth satellite

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Is Quality Audio Dead?

by Joe Martinson - President

Joe seeks to dramatically improve pro audio.

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Article summary:
Technical quality standards are on the decline in pro audio. Martinsound believes high quality audio is worth the effort it takes to achieve.

"Hope you've had the reaction you wanted from the Mic Preamp. I thought that it was a masterpiece of design and implementation. Sounded great. Unfortunately, the market has gone the other way, so to speak, and even Bill Schnee has come around to my thinking: quality audio is dead in the water for the time being."

-George Massenburg

George sent me this depressing e-mail message with the subject title "Good Morning". How could I have a good morning if the Pro Audio market no longer cares about quality audio? Martinsound is staffed by a diverse team of highly skilled audio artists and technical innovators who live for superior sound. Will we be out of work unless we build the "cheap" over the great? I hope not.

Those who care deeply about quality audio seem lost in a sea of look alike competitors, who churn out poor sounding product in ill-conceived facilities, staffed by semi-professionals working with hard to use, cheaply made, sonically flawed equipment. How did we get to this deplorable state?

One factor is the decline of the mentor-apprentice relationship. Forty years ago, an engineer worked at one facility and trained the next generation. With the rise of the independent engineer, the mentor-apprentice relationship deteriorated to part-time and is now almost nonexistent in the isolation of the home/project studios. The new generation may care about quality audio, but who is their teacher? Can it be learned by purchasing a mic, a Mackie and an A-Dat at the Guitar Center with Mix, EQ and Studio Sound magazines to supply theory and practice?

The best way to facilitate change is to fill the mentorship void. The battle is both in and between the ears. We must teach that the audio business is about audio and the artistic control

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Helping You Stand Out

The best way for you, the true audio professional,

to rise above your competition is by using tools and techniques that differentiate you in the marketplace. At Martinsound, we are committed to ensuring that you get the most from your audio equipment investment. We want work together to help you meet your creative and financial goals. Our solutions are not limited to just audio equipment but also include the theory, practice and vision that will allow you to produce great sounding, artistically satisfying and financially rewarding results.

By Chris Walsh - Vice President of Sales

Chris loves a certain old guitar and happy customers.

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Products mentioned in this article:
Audiomate, Flying Faders, ACX, MultiMax, EMT Upgrade, Elite Consoles

Article summary:
Martinsound has created superb products that increase your profits while protecting your previous investment.

Studio owners are acutely aware that their investment in sound equipment must turn a profit. The mixing console is often the single most expensive piece of equipment in a studio, and every studio owner would like to maximize his or her return from it. Not everyone can - or wants to - replace their console every 5 or 6 years. But the addition of a key piece of relatively inexpensive hardware can ensure that, rather than having to invest in a brand new console, a studio owner can not only increase his profitability but also extend the life of their existing mixer.

You need to know that every item of equipment you purchase will result in a productive return, whether in the form of increased bookings, the ability to increase the hourly rate or better service your customers. Installing a moving fader automation system in your console, for example, is an investment that can pay for itself in a relatively short time, by attracting more business and enhancing the reputation of the studio as a facility with only the best mixing tools available for its clients.

King Sound & Pictures in Los Angeles added Flying Faders' to its vintage API 3208 Console. Available exclusively from AMS Neve, Flying Faders was developed by Martinsound in 1989. Studio owner Jimmy Sloan, comments, "It has been one of the smartest business decisions I ever made. Since adding 38 channels of Flying Faders, the phone has been ringing off the hook."

King Sound went from 60%-70% bookings to 100% following the upgrade. Adding moving fader automation to your console means that you no longer have to turn away profitable mix business, and can keep each project in-house from start to finish. Whether you add Flying Faders or Audiomate' (available exclusively from Martinsound) the life, usefulness and profitability of your console will be extended, and the system will return your investment very quickly.

The same can be said for the Martinsound ACX' (Automated Console Expander). With a modest investment, rather than a major console replacement, a studio can expand the capabilities of its existing mixer, and will no longer have to turn away business because of equipment limitations. Tracking and mixing sessions requiring a large number of inputs can be booked without the need to spend a fortune on a new, larger console or expensive custom extender. Also, the investment in an ACX may be spread between several rooms in any facility with more than one Flying Faders-equipped console.

Todd-AO purchased a Martinsound ACX for installation at their Radford facility in North Hollywood, California, where it provides an additional 48 inputs to the studio's Flying Faders-equipped Neve V3 console. The ACX was recently used on sessions for James Horner's score for Mighty Joe Young (Walt Disney Productions). Todd A-O's supervising engineer for the scoring stage, Marc Gebauer, reports that the ACX was a crucial piece of equipment, facilitating the largest mix ever completed on the stage. The mix involved the simultaneous use of two 48-track and two 24-track tape machines, and would not have been possible without the addition of the Martinsound ACX.

Elsewhere in the signal chain, the addition of a key piece of equipment can have a great impact on your ability to attract more business and increase your revenue. Adding the MultiMAX' by Martinsound, for example, will enable you to handle DVD and 5.1 production. MultiMAX is a fully programmable, multi-channel surround sound monitoring controller, which may be added to any mixing console with 8 or more buses to provide comprehensive control of 4-, 6- and 8-channel speaker systems, in any surround format.

Multi-channel monitoring can be a costly option for high-end consoles and may be very expensive to custom engineer for older, discontinued mixers. Dedicated multi-channel monitoring panels for high-end consoles are often over 10 times more expensive than MultiMAX. A very modest investment in a MultiMAX unit will provide any studio - whether it features a console costing $250,000 or $25,000 - with a valuable tool for monitoring and producing multi-channel surround material.

Doug McClement, owner/operator of LiveWire Remote Recorders of Toronto, Canada, added Martinsound's multi-channel monitoring control system to his 70-input Neotek Elite console. McClement points out that the upgrade "extends the life of the console by three or four years," adding, "It's far more cost-effective than other options."

The MultiMAX unit is a prime example of the synergy between Martinsound and our customers. When the device was debuted, it became clear from customer comments that the limited features were not sufficient to meet the requirements of the majority of professional facilities. We met with industry professionals to learn more about their needs, resulting in a unit that is capable of handling any current format, with internal options to allow us to adopt new conventions, thereby warding off obsolescence.

Our desire to assist our customers to get the most from their equipment extends even to outboard signal processing. Many of you have heard of the EMT 140 echo plate system, even if only as a preset on your favorite Lexicon reverb unit! Owners of these vintage units know that the EMT 140 is unparalleled in its ability to produce natural sounding reverberation, but due to its age can be very noisy, prone to distortion and offers limited headroom.

The Martech EMT 140 Upgrade Electronics result in greater dynamic range, with lower noise and extended headroom, which lets the sound of the plate shine through. Installation of the upgrade in your EMT unit will give you performance comparable to 20-bit digital devices, and will give you the freedom to use reverb much more creatively. Plus, your twenty-

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An elegant alternative to a costly in-house project

by Dale Manquen - Senior Vice President

Dale is RMS Product Manager. A true audio pioneer, he previously developed Audio tape recorders for 3M(56) and Ampex (ATR100). His passions are model trains and teaching.
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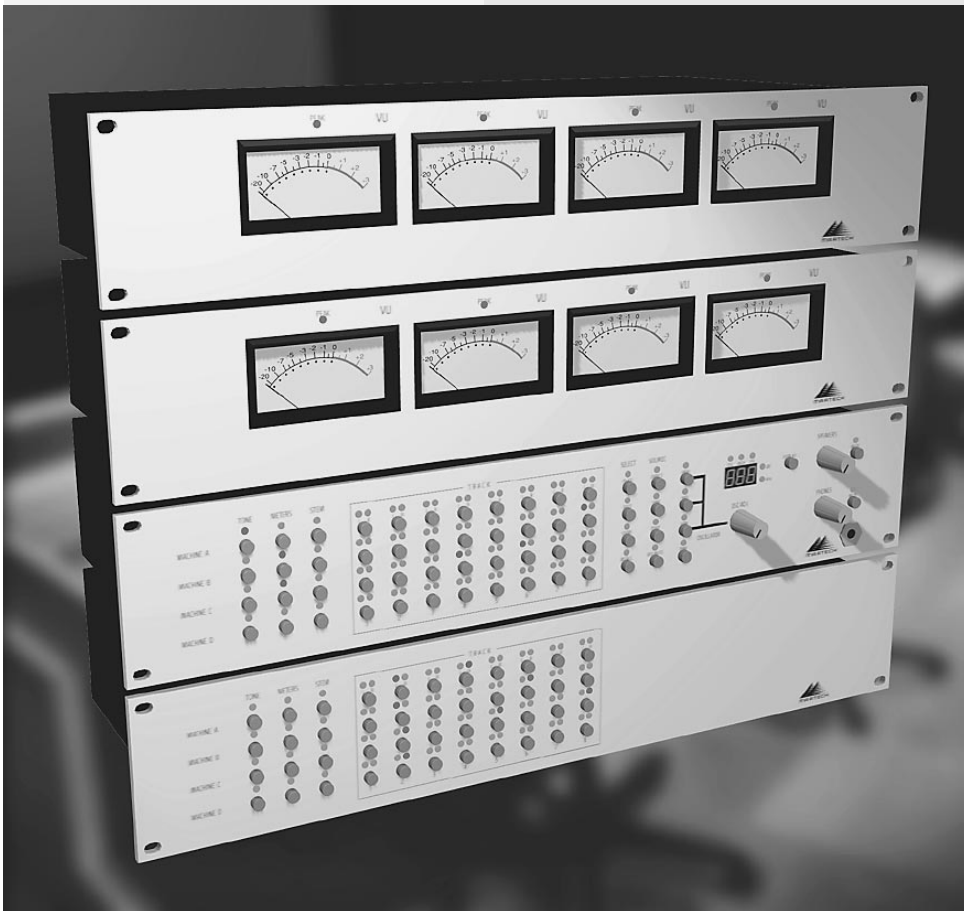
Products mentioned in this article:
Martinsound RMS Recordist Monitor System

Article summary:
Our Recorder Monitor does it better than build-it-yourself solutions and you won't tie up your technical staff now that an off-the-shelf product is available.

The Martinsound Recorder Monitor System (RMS) is an off-the-shelf solution to what has traditionally been a costly and labor-intensive project for many studios. Previously, motion picture studios and post production houses had no choice but to commit their in-house engineering resources to the time consuming and expensive task of designing and constructing a custom recorder monitoring unit that would meet their needs.

At Martinsound, we saw the opportunity to develop a recorder monitor system that could combine all of the features that the studios needed, while adding advanced ideas of our own, at a higher level of performance and lower cost than had previously been possible.

We seem to have gotten it right: in just nine months of production we have already supplied eight systems to studios like Warner Brothers, Universal Pictures, Todd-AO and Four Media Corporation (4MC). The versatility of the RMS is such that it will fit a wide range of applications, including recordist's monitoring, track combining for copies and transfers, quality control monitoring of multiple format masters and distribution prints, and changeover projector switching.



RMS consists of 2U rack-mount modules. The system controls up to 16 machines, or 128 tracks.

The RMS is a compact, modular, rack-mounting multi-input monitor and switching matrix

The RMS provides the machine room technician with programmable alignment, monitoring, metering and track combining facilities. The basic system is a 2U master module with four 8-track recorder inputs, which may be easily expanded with the addition of up to three 2U expander units to monitor a maximum of 16 machines, or 128 tracks.

Communication between the master and slave units is via simple serial wiring, which permits distributed placement of the units or multiple paralleled control panels. For example, one control unit could be in the machine room and another in the studio, or a roving remote control panel in the machine room could give the technician control of the test oscillator and monitor functions at the recorders.

Alignment procedures become quick and easy with the RMS. One button per 8-track machine provides automatic tone injection via relays to the recorder inputs. The master unit includes a built-in programmable sinewave oscillator, pink noise generator, and balanced input for an external test signal. Three switches designated HIGH, MID and LOW store and recall preferred setup frequencies and levels from the internal oscillator. A 4-digit display provides readout of the oscillator frequency or level - or loudspeaker or headphone monitor level - depending on the mode selected.

The RMS features excellent isolation and crosstalk specifications, allowing the oscillator to be used to align recorders even while other machines are in use on the stage. Separate tone buffer amplifiers for each recorder eliminate oscillator level variations as the number of machines or tracks is changed.

The RMS monitoring paths provide for LCR placement of each track, with separate level, mute and dim controls for headphone and loudspeaker outputs. Sources may be selected from the 96 inputs - recorder inputs, sync outputs and repro outputs from four 8-track machines - feeding each unit.

The assignment of sources to the loudspeakers and meters is made via an LED matrix and 4 mode buttons in conjunction with the 32-button array on the front panel of each unit. A multi-mode Solo function allows a single track or combination of inputs to be monitored by the operator.

Assignment configurations can be easily stored for later recall, further speeding-up the alignment and recording processes. Up to 32 snapshots may be stored of the input source selection, loudspeaker and meter assignments. Two of these snapshots are reserved for a special 'Changeover Screening' mode.

Eight meter buses, usually connected to an optional set of 8 VU meters, sum the signal from any combination of like-numbered inputs (i.e. Meter #1 is fed by any number of Track #1 inputs from the recorders). Optional auxiliary balanced line outputs from the 8 meter buses may be used to drive output buses for transferring and copying, 8 monitor channels for changeover screenings, or additional external meters.

System prices depend on exact the configuration, and start at around $6,200 for the master unit and approximately $4,800 for each expander unit.

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Handle Bigger Projects

Martinsound
Helping You Stand Out

If space is at a premium in your control room

and you are turning away projects due to the limited number of automated inputs in your mixing console, we have the answer to your prayers. You can now handle those bigger projects with the full-featured, moving fader

by Dale Manquen - Senior Vice President

Dale has been Flying Faders™ product manager for it's entire history. He contributes regularly to the Flying Faders™ users group.

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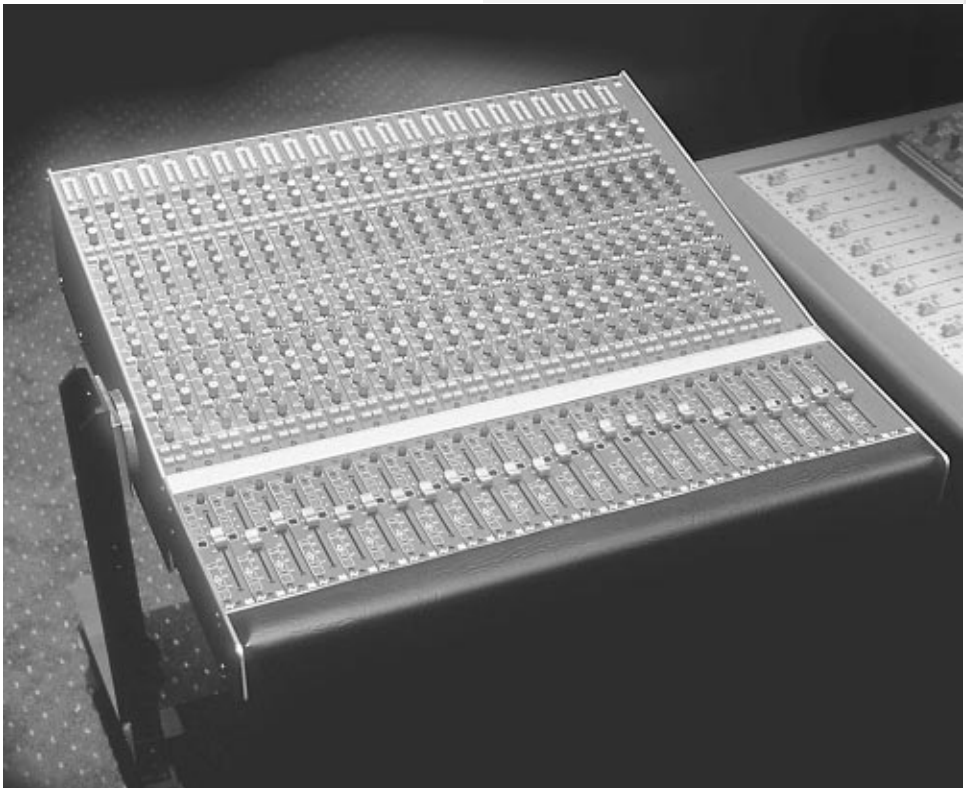
Products mentioned in this article:
ACX Automated Console Expander
AMS Neve Flying Faders.

Article summary:
Expanding your existing system. Detailed description of ACX features, and integrating ACX with your AMS Neve Flying Faders.



This ACX sits beside the Neve V-series console with Flying Faders in Martinsound Control Room One

channels of the Martinsound Automated Console Expander (ACX), an automated 'sidecar' that may be fully integrated with the host console's multitrack, auxiliary, stereo and solo buses, and integrates completely with Flying Faders.

Martinsound first became involved in the automated sidecar console business in 1993 with the development of the original 'Miniconsole' for film dubbing rooms. The Miniconsole offered the bare necessities for studios seeking to add more inputs to their consoles: 24 channels of fader and mute automation, with assignment switches to 6 buses. Four of these Flying Faders-automated units were built for rental, and during the next 4 years were used on over 70 major motion pictures by 11 major dubbing theaters.

We soon noticed that the projects in music recording studios were outgrowing the 60-, 72- and even 96-input consoles. Buying a new, larger console is expensive and, in many studios, there is often no space in the control room for a bigger desk. Consider, too, those studios with older 'classic' consoles that are no longer manufactured. Finding vintage modules to match their particular model of console is near impossible, not to mention the prohibitive costs of custom-engineering a larger frame.

Adding an inexpensive analog or even digital outboard mixer would seem to be the logical solution, but many studios are simply not prepared to compromise their audio quality. The engineer also loses the ability to conveniently save the automation mix information for all of the channels, making remixes a nightmare.

The minimal functionality of the Miniconsole was not a problem for dubbing theaters, where many of the tracks being mixed had been processed during the pre-dub stage. Music recording studios also needed more inputs, but they required more features than those offered on the Miniconsole. The situation called for a 'sidecar' that could be fully integrated into the buses and automation system of the studio's console, and with faceplate features that were closely matched to those on their own desks. The Martinsound design team responded with the ACX.

The versatile ACX input module was designed to include a 4 band equalizer with sweepable high- and low-pass filters, 4 auxiliary sends, assignment to 8 buses plus a stereo mix, panning, direct output, insert, manual mute and non-destructive solo switches. All inputs and outputs (including the direct output and the insert send and return) plus the summing buses are balanced to provide maximum noise immunity and dynamic range.

The equalizer features two switchable Q settings on the two mid-frequency bands and peak or shelf selection on the High and Low frequency ranges. The frequency and boost/cut controls are continuously variable. The two filters may be individually switched into the signal path.

Each channel strip features two line inputs with separate detented trim controls and associated screwdriver-adjustable calibration pots. The two inputs may be selected individually or summed, doubling the number of inputs that may be monitored through the console, or allowing easy comparison between two stem mixes, for example. The Input Select and Sum switches may be automated.

Complete integration with Flying Faders allows mix data for the console and the ACX to be saved as a single computer file and permits the ACX to be included in global solo and group assignments. Additionally, four module switches - Input Select, Input Sum, EQ In and Insert - may be automated with the optional events control features of Flying Faders.

A fully featured and flexible console expander

A 24-channel, 48 input ACX measures just 30 inches (76.2cm) wide and only 32 inches (81.3cm) front-to-back, fitting easily into control rooms with limited available floor space. Sixteen and 32 channel frames are also available. All configurations include an extra module slot for customization.

Martinsound's Senior Vice President, Dale Manquen notes, "For the studios that are dedicated to preserving vintage analog consoles, the ACX permits the addition of more high quality channels at an affordable price. On the other hand, studios poised to make the plunge into an all-digital console may choose to hold back for a year or two while the features and pricing improve. A modest investment in an ACX will help to keep the studio competitive during the interim."

Prices start at around $38,000 for a complete 16-channel system, including Flying Faders automation. ACX systems are also offered for rent.

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Natural Sound Methodology

by Shawn Micheal,
Martech Natural Sound Lab supervisor.

When Shawn isn't making the world safe for audio, he is using his creations to make better records.

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Products mentioned in this article:
MSS-10 natural sounding, high resolution microphone preamplifier.

Article summary:
Critical Listening is the key to knowing when it' s right.

Audio engineers take pride in being able to hear

things that most others are incapable of hearing. In reality, the average citizen can probably hear just as well, it's just that they don't know how to listen. To understand what engineers do, we must differentiate between hearing and listening.

An analogous situation to hearing and listening is eating and tasting food. I thoroughly enjoy eating, but I perceive a dish as one, big, wonderful flavor, whereas my wife tastes the same dish as a collection of individual flavors. What this means is that I enjoy the dish and that's it, but my wife can go home and duplicate it. She has learned how to breakdown the whole into basic elements and knows how the details work together to form one magnificent piece of art. In many ways, great chefs are like top engineers. Chefs use their ability to taste while engineers use their ability to listen.

Engineers as a whole have developed their ability to listen so as to focus not only on the main subject, but also on the nuances of what is surrounding the subject, and even beyond. For the average engineer the subtleties of balance, eq, panning, reverb and/or echo of each element is almost as important as the song itself. Just as the chef must decide whether to sauté in butter or olive oil to get the right flavor, the engineer must decide things such as how wide the stereo spread on background vocals should be to give them impact without causing distraction. But for the top engineer, other issues such as spatial imaging or dimensionality and low-level detail are also as important, just as the master chef is as concerned with presentation as with taste.

The question is how well do we listen?

Even critics don't agree on how to listen

This author once read a review where the reviewers agreed on the sound quality of a power amp, but one felt that it placed you in the fourth row of the audience, while the other thought it put you in the eighth. Half of the review was arguing this trivial(?), subjective(?) issue. The question should be, which row did the producer and engineer intend?

There are two issues that need to be addressed. First, does it sound good? This is a subjective decision based upon the emotional response of the moment. Second, does it sound as good as the original source? This is an objective decision based upon the evaluation of a device, component, etc., against the sound source. If a device sounds "better" than the original source then the coloration is termed "euphonic." If a device sounds the same as the source then it is termed as "neutral" or "natural." If the device sounds worse than the source then there are hundreds of esoteric or vulgar words that might be used to describe it, depending on how different it sounds. Objective listening is the main concern of this article.

Audio Magic From MARTECH™ Natural Sound Lab

The symbol of awesome sound and technical excellence

When research and design began for the MSS-10 Mic Preamp, we auditioned many different manufacturers' preamps and realized that no two sounded alike. Many sounded good, but which sounded the most correct? We realized that we needed a listening system that provided a high degree of resolution, to most accurately assess each against a known source.

Bud Wyatt, Martech's electronic engineer on the MSS-10 project, had many years of experience in critical listening electronics design with The Mastering Lab and Sheffield Lab. After Bud gathered recommendations from fellow audio enthusiasts, we auditioned and chose equipment for our listening room. That was when the fun began.

Bud modified a CD player, replacing all analog stages with custom electronics to provide a repeatable sound source, allowing the listener to acquaint himself with a passage of music through looping. Repeatability was recognized as the only way to make honest comparisons.

After extensive listening we chose a rotary switch made from coin silver to use as the A/B switch. (The same switch we use in the MSS-10!) Careful attention was paid to the influences of wire and impedance. Connections were hard wired with silver solder, so that connectors would not influence the sound.

Finally, we could begin to audition amplifier technologies. Active and passive components were listened to individually and collectively, for timbre shifts and dynamics. Many devices that touted extremely low distortion didn't do well at all in listening tests. Most were found to cause changes in tonal quality, imparting a synthetic, edgy character and demolishing the depth and energy of the audio.

Components and topologies were tested for flawless audio reproduction. Daisy-chaining multiple 20dB amplifiers together with 20dB pads magnified any distinguishing footprint left by an amplifier design. We found this method to be a true test of how a system can deteriorate the audio, a test most designers avoid. This test also forced us back to the drawing board many times. When the right amplifier design was found, the whole process had to be repeated in the development of our custom input transformer.

The ultimate test of the MSS-10 design was with a microphone on a live source. To say we were stunned by the results is an understatement. We expected to hear an improvement in quality, but what we actually heard was a lack of "gunk"! All the sound and character of the microphone was there, but that was it. No distortion, no blurring, no hype, no roll off, nothing.

We had never realized just how badly preamps destroy the sound

The MSS-10 allowed us to experience the microphone like we never had before.

Quality audio is made up from performance, environment, and the audio tools used to capture it. Martech is developing audio tools, like the MSS-10, for engineers like you, to stand out among your peers. Critical listening enabled Martech to develop a markedly better microphone preamp, allowing you to seriously enhance any recording project. The beauty and clarity of the MSS-10 will provide a dramatic difference. Your clients will love that!

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The MSS-10 Mic Preamp

It's Gonna ROCK Your World

Sure the natural sound of the Martech MSS-10 is phenomenal for classical recordings, but it can also roll over Beethoven with in-your-face vocals, shredding guitars, killer drums, bass with balls, and amazing room ambience. There's nothing limp here. The MSS-10 mic preamp was created in Martech's intense, double blind, high resolution torture chamber. As a result, it sounds incredible, even under the most abusive conditions. So if it rocks in real life, it will rock in your track...

Or We'll Buy It Back!

"I've done blind listening tests with the MSS-10 against other mic preamps, and there's really nothing to compare it to. It almost has a tube warmth to it, and it's very accurate."
–Jim Devito

"I never use anything else when recording vocals."
–Bobby Croft

TEC 1998 Nominee

"What is important to me, is the musicians like the way it sounds."
–Bruce Botnick

"From now on, whenever I record, I'll be using the MSS-10s. I would love to have a ton of them."
–Al Schmitt

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If for any reason you are dissatisfied with an MSS-10, return it within 60 days in original condition to the place of purchase and get your money back.

Deliver Awesome Sounds

by Shawn Micheal
MSS-10 product manager
Shawn is one of our top product design specialists. In addition to supervising the MSS team he contributed to the development of Flying Faders and MultiMAX.
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Products mentioned in this article:
MSS-10 high resolution microphone preamplifier

Article summary:
Industry giants are using MSS-10s on their sessions. The natural sounding mic preamp is also an AES TEC Award nominee.

By now many of you are aware of the MSS-10 mic preamp. Perhaps you've read an exceptional review of the unit, or paused for a moment to admire its sleek good looks in one of our ads. Maybe you noticed that the readers of Studio Sound magazine singled out the MSS-10 for a commendation in the Outboard Preamp category of the Audio Industry Recognition Awards earlier this year. More recently it was nominated for a TEC Award, in the category of Outstanding Technical Achievement in Microphone Preamplifier Technology.

But while you're reading the trade magazines your competitors, some of the top people in the industry, have taken the time to audition and evaluate the MSS-10. Some well-known names are now using the MSS-10 to help them deliver some truly awesome sounds, perhaps even to your former clients...

Of course it's a great honor to be recognized by our industry with award nominations, but it's the comments of our clients that really matter. No stranger to award ceremonies himself, Al Schmitt has accumulated seven Grammy Awards for his engineering work over the years, and was inducted into the TEC Awards Hall of Fame in 1997. Al was recently introduced to the MSS-10 when he used four of the mic preamps on the scoring sessions for the 20th Century Fox motion picture Hope Floats at Capitol Records in Hollywood. "I had a great experience with them," says Al.

Al also used MSS-10s on Vince Gill's new Christmas album. "I used them on his voice and a couple on the room," he says. "They were fabulous!" As we went to press Al was in session at Capitol with Diana Krall, using 5 MSS-10s to record Johnny Mandel's orchestra. He also reported that he used MSS-10s on a recent Monica Mancini album session, featuring guest vocalist Johnny Mathis.

Grammy Award-winning engineer, producer and mixer Bruce Botnick put his rack of 8 MSS-10s to good use on several Jerry Goldsmith scoring sessions, including Walt Disney's animated feature Mulan at Todd-AO Studios, and DreamWorks' Small Soldiers at 20th Century Fox. Most recently he took his rack of MSS-10s to England, to record the Goldsmith score for The 13th Warrior (Touchstone Pictures) at AIR Studios.

Sony Music Studios in New York City recently purchased a pair of MSS-10s. Assistant Director of Audio Engineering, John Williams, reports that the mic preamps are in constant use throughout the multi-room complex. "All the engineers are very happy with them," he notes. "We'll be picking up a third unit soon. We're looking forward to using them with our Neumann microphones on the Decca tree." Initially used on sessions with Branford Marsalis and Wyclef Jean, the MSS-10s have seen action with Hanson for Hard Rock Live, and on sessions with Fastball, Lucinda Williams, Harry Connick Jr. and Joe Pesci.

Using an MSS-10 dramatically increases the artistic contribution your microphones make to a project.

Let's take a look at the design of the MSS-10 and see how it can help you capture your mics' true excitement. The MSS-10 mic pre incorporates two stages of non-inverting amplification, providing 20dB to 65dB of gain, switchable in precise 5dB steps. A 20dB pad, phase reverse and +48V switching are included.

The line driver offers additional level adjustment from (to +10dB of gain. A CAL switch bypasses the level control, providing unity gain output. A mute switch is provided. The source may be selected from either the mic pre or a separate balanced line input. The line input can be used for the insertion of a signal processor (e.g. EQ), maintaining the shortest, fully controllable audio path to the recorder. A professional, full-size VU meter indicates level at the line output.

The MSS-10 offers a pristine path to tape, bypassing the console, for the best possible reproduction of your source. At Retrophonics Studio in Florida, Jim DeVito prefers to use MSS-10s rather than the mic preamps in his main recording console. "The MSS-10 is a fantastic piece of gear," he says. "I use it on vocals all the time, but it can be used on everything."

Bobby Croft, former member of The Greg Allman Band and owner of The Grey Area Studio in Orlando, Florida, recently purchased an MSS-10 to use with his Augan 24-track digital recorder for record production work with up-and-coming talent. The MSS-10 has become the preamp of choice. Enthuses Croft, "With the MSS-10 I can really use my tube mics."

Natural Sound means that for the very first time you can hear every glorious detail from your microphones, giving you awesome sounds from mics you already use. This revolutionary technology is no substitute for talent and passion, but if you have what it takes to stand out, the MSS-10 delivers the sounds you have always dreamed of.

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The Value of A Console

by Craig Connally - Vice President and Neotek Console Product Manager.

Before joining Martinsound, Craig was CEO and owner of Neotek Corporation.

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Products mentioned in this article:
Various Neotek consoles
Audiomate - moving fader automation
MultiMax - multiformat monitor controller
Article summary:
Our consoles are investments that last much longer than most.

A studio's success can often be attributed to its Neotek Console. Studio owners praise the pure, clean signal path that results in the finest quality sound. They commend the circuit designs, components and construction methods that are largely unchanged since their inception, designs that are simple, yet flexible enough to cope with any situation. They point to the build quality that means no downtime and easy maintenance. All agree that a Neotek Console is built to last.

But what do you do as the demands of the market change? One thing is for sure: there's no need to replace your Neotek. Other consoles may have plenty of features, but it's the sound of a Neotek that keeps your clients coming back for more. And as you grow, your Neotek can grow with you. There are plenty of examples of studios that have chosen to keep their Neotek, often upgrading and reconditioning it, rather than replacing it with the latest technological marvel.

SugarHill Studios: "Warmer and more musical" Need automation? We'll help you install a moving fader system. SugarHill Studios (Houston, Texas) recently decided to recondition their 56-input Neotek Series IIIC Console and to add automation. Studio President, Dan Workman, explains: "We considered replacing the Series III with a newer board, one with more bells and whistles, including automation. We began looking for a new board in the $80,000 to $150,000 price range, but after several critical listening sessions we discovered the old Series III sounded warmer and more musical than any of the newer boards we auditioned."

The result has been a new lease on life for the console, which was purchased in 1988 from Sheffield Audio. "Our clients have always loved the sound of the Series III," continues Workman. "Our engineers love how the minimal signal path design of the Series III doesn't smear the sound-stage of a recording, and the addition of the Audiomate moving fader automation has given them new reasons to love this console."

Workman, explaining the decision to add the Audiomate System, says, "We looked at several different systems but decided on the Audiomate System because of the price. Another deciding factor was the Macintosh-based software."

Studio V.P. and technical guru, Rodney Meyers, oversaw installation of the Audiomate System, and notes that "the system has had a significant impact on the quality of mixes at SugarHill." Meyers continues, "The automated mutes make it possible to reduce tape and processor noise to the bare minimum." Chief Engineer Andy Bradley is also thrilled with the Audiomate System: "I'm doing incredible things with my mixes now, things I couldn't physically do before the automation was installed. And the intuitive user interface is easy enough for part-time and visiting engineers to learn with little or no formal introduction."

Stewart Levin shows his Neve with Audiomate who's boss.

The staff at SugarHill report that on a recent visit by Interscope recording artists Smashmouth, freelance engineer/producer Eric Valentine was so impressed by the clarity of the tracks recorded through the Neotek that he exclaimed, "I can't believe I haven't heard of this console before now. It sounds really awesome!"

LiveWire Remote: "Such a purity of sound"
What about 5.1 and DVD? We've got that covered, too. The Neotek Multimedia Module is a simple retrofit, and will extend the surround-sound mixing capabilities of any Neotek Console. McClement, owner and operator of LiveWire Remote Recorders (Toronto, Canada) purchased a Neotek Elite from a studio in Connecticut in 1987 for installation in his truck. The console is configured with 50 mic inputs, 8 stereo and 4 mono line-level inputs, and has recently been upgraded to include the Multimedia Module.

The Multimedia Module may be fitted (or retrofitted) into a single-channel blank space in any Neotek Console to provide comprehensive multichannel monitoring control. "I'm very happy with the sound of the Elite," states McClement, who figures that the upgrade "extends the life of the console by 3 or 4 years. And it's far more cost-effective than other options." Plus, as he points out, "Relatively few manufacturers have addressed the provision of surround monitoring in consoles. The demand for 5.1 mixing is growing, and I want to be ready."

For many producers and engineers a big attraction of the LiveWire Remote equipment list is the combination of the Neotek Elite and two Ampex MM-1200 24-track analogue tape recorders. The Neotek/Ampex pairing offers "such a purity of sound," says McClement. He points out that he was recently booked to record a concert by classical violinist Pinkus Zuckerman because of the Elite, noting that "Neotek Consoles have a great reputation with the classical guys."

"We've averaged one hundred shows a year for the last decade," notes McClement. "Eighty percent of what we do is live TV broadcast, mainly awards shows and concerts." With such a demanding schedule the equipment needs to work perfectly every time. The design and construction of the Neotek is ideal for the job. "The use of ribbon cables between channel modules, instead of a motherboard with plug-in connectors, means that the console travels well between remotes," says McClement. "The Neotek Elite has proved 100% reliable."

Osceola Studios: "It sounds great"
For some studios the sound quality of their Neotek is the key to their success. Robert Clarke, co-owner and producer, credits the Elite with establishing the reputation of Osceola Studios (Raleigh, NC) in their region. "The sound of this console has moved the studio into the lead in this area. Tapes made on the Neotek just sound great."

The console is fitted with moving fader automation, configured with 32 mic and 8 stereo inputs, and was originally installed at Bermuda Sound. Clarke, commenting on the history of his Elite, notes that it is the console used to track Keith Richards' guitars for his first solo project, 'Talk Is Cheap' (1988). The board was acquired by Osceola Studios in 1994, and has since been used to record artists like Blues Traveler, The Connells and Chaven Melon.

Clarke runs down the list of disasters that the console has survived: "There was a shipping disaster, flying the board in from Bermuda. There had been a ceiling cave-in while the console was installed at Bermuda Sound. And then two years ago, during a bad hurricane, our studio was hit by lightning." But the Neotek Elite survived. "This console is built like a tank," notes Clarke. "It sounds great, it's easy to get parts for, and it has never stopped working."

TWC Music: "Nice, warm sound"
Kenneth Andres, owner of TWC Music (Jacksonville, FL), also credits his Neotek with helping to establish the reputation of his studio in the area. In 1991 Andres purchased a 36-input Series II that used to belong to Todd Rundgren, and has had 7 years of trouble-free operation. "It's a great sounding board," he says. "I've compared mixes done on my Neotek with those

Continued on page 10

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Escape the Semi-Pro Pigeonhole

With a sonically superb Neotek Elite II Console,

which is now available in a surround-sound package, fitted with 2 moving faders per channel, and the MultiMAX multichannel-monitoring controller. This powerful system will provide your studio with the tools to meet the challenge of mixing for DVD or any film and post production surround format.

From the mic pre to the stereo bus outputs the Elite II signal path demonstrates a no-compromise approach to circuit design, utilizing custom hybrid circuits and discrete designs to produce a console that meets stringent performance standards worldwide. Two stereo buses, 24 multitrack buses and a flexible dual channel architecture give you the convenience of in-line monitoring and offer many signal routing possibilities.

Each input module features 2 audio paths, controlled by faders: a 60mm on the Monitor path and a standard 100mm on the Fader path. The 2 audio paths may operate independently, in parallel, or in series. Each path may independently select its input source from the mic preamp, the line input or the module's multitrack bus output. This flexibility allows you to create up to 32 auxiliary sends during mixdown, for example, or to set up subgrouping with dedicated effects sends.

The variable high pass filter, insert and 4 band parametric equalizer on each channel may be separately assigned to either audio path, as may the 6 auxiliary sends. A fader reverse function effectively doubles the routing possibilities of the Elite II.

Now the power of the Elite II is further enhanced with the addition of the Audiomate' moving fader automation system to both the Monitor and Fader paths. Frame sizes start at 32 channels, giving you 64 moving faders at your fingertips in even the smallest chassis.

If you're not ready to upgrade your console to a Neotek, Audiomate is available separately for retrofitting into virtually any mixer. The Power PC native, Mac-based software and intuitive user interface has established the Audiomate system as the first choice for many mixing professionals, yet the powerful software is easy for even the first-time user to operate.

Add the MultiMAX multi-format monitor controller to the package and you are ready to meet the demands of LCRS, 5.1 or 7.1 mixing applications. All of the functions in MultiMAX are under microprocessor control, so you can easily configure your studio with several different loudspeaker setups and program the unit for multiple surround formats and processors. MultiMAX even provides film-style features normally found only on expensive, dedicated post production consoles.

Call now to receive more information on the system. You can now order Neotek consoles factory-direct from Martinsound, built to your specifications. Call for a price quote. System prices for a 32 channel Neotek Elite II with Audiomate and MultiMAX start at $66,000.

by Craig Connally - Vice President and Neotek Console Product Manager.

Before joining Martinsound, Craig was CEO and owner of Neotek Corporation.
cconnally@martinsound.com

Products mentioned in this article:
Elite II consoles with Audiomate
Article summary:
It's hard to demand top rates with a Mackie. Martinsound offers the perfect balance of price and performance.

NBC Tonight Show audio is produced on this Elite II. All Neotek consoles are specially built to customer requirements.

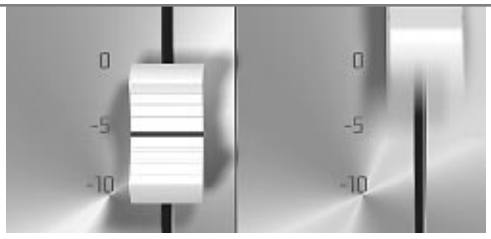
NBC Tonight Show band goes Elite

NBC purchased a Neotek Elite II console during a recent refit of their Burbank, California studios. The console, configured with 56 mono and 8 stereo inputs, was installed in the audio control room for 'The Tonight Show with Jay Leno', where it is used to mix the live band and guests.

Other recent sales have shown the continued popularity of Neotek Consoles including the renowned recording engineer Steve Albini has ordered an Elite II with 56 mono and 8 stereo inputs, with extensive modifications in the console master section. The console will join a Neotek Series IIIC at Albini's Chicago-based Electrical Audio. Musical Productions in Puerto Rico installed an Elite II with 40 mono and 8 stereo channels, outfitted with Audiomate moving fader automation system. The console is the second Elite to be installed in 5 years at this top production facility.

Post consoles sales include two Encore Film Consoles installed at Cinemagic in Athens, Greece and at Anand Recording Studios in Bombay, India. Closer to home Twentieth Century Fox has installed three Essence ADR consoles with our ADR Control Pro System under license from LarTec.

With the intuitive and powerful Audiomate Moving Fader Automation System



Console automation is easy to use and does not interfere with mixing; the mix engineer has enough to do without having to constantly refer to a computer screen. Audiomate moving faders completely eliminate the noise and distortion introduced by VCA automation systems.

Audiomate' motor fader automation costs around $500 per channel. The new budget 32-channel system package is just $14,000. Installation into the mixing console is a very simple operation, and usually does not require the addition of any custom metalwork.

The intuitive system software provides a color-coded screen display for the basic operations (channel and global operations, fader and mute grouping, cue list and machine control), while pull-down menus access the more sophisticated functions like snapshots and off-line editing, and is easy for even the first-time user to operate.

The Mac / Power PC-native system has established itself as the low-cost moving fader automation of choice for many studios around the world, in a wide variety of console types.

Users include Stewart Levin (Neve), Interlock Audio Post (Westar), John Keane Recording, Treasure Isle Recorders and A-Pawling Sound (all Trident), Time Warp (DDA), Brian Bennet Music and Bismeaux Studios (both D&R) and many Neotek Consoles, including Synchronized Sound (Elan), PolyGram's Champagne Studios (Elite), Musical Productions (Elite) and SugarHill Studios (Series IIIC).

Audiomate is a product of Audiomation Systems Ltd. of England and includes servo control cards manufactured for Audiomation by Martinsound. Martinsound is the exclusive U.S. distributor of the Audiomate system.

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Continued...

Do Surround Projects from page 1

speakers. Each loudspeaker output has a level trim using digitally controlled attenuators rather than VCAs to insure accuracy and sonic quality. When you want to monitor at a non-standard level, MultiMAX gives you precise, front panel gain control across for all speaker outputs with a large, illuminated digital readout, making monitor level changes easy and repeatable.

You can connect MultiMAX to your machine control system for mute during fast wind, or to an intercom system in master control for automatic dim during talkback. You can turn on or solo individual monitor sources to isolate problems before bass management functions. Most importantly, MultiMAX is the only system that allows you to retain your mixing console's solo functions (including mono, stereo, AFL, PFL, and in-place) when working in multichannel surround.

MultiMAX lets you can add post production features to your console and still retain your music recording clients, so you can expand your client base and keep your room fully booked. Film-style post production mixing is made possible with Direct/Playback (PEC/Direct or Tape/Bus) monitoring across all 7.1 channels. Three surround-formatted premixes may be monitored as context mixes through MultiMAX individually or in any combination with the Direct/Playback input, without using up inputs on your console. For music scoring, the reference production dialog track may be mixed into your monitors with its own level control, and you can make a direct stereo recording off the automatic downmix output.

Metering your LCRS, 5.1 or 7.1 levels is another area where MultiMAX offers solutions. MultiMAX gives you a special meter connector so you can add 8 (or 6 with 2 for Lt Rt) dedicated meters of your choice. These meter feeds automatically follow the source being monitored in MultiMAX, including the effects of PEC/Direct switching, selection of premixes (so that you can get an idea of the levels in the final mix), or selection of alternate signals-chores your console's meters are just not up to.

MultiMAX provides a standard of audio performance appropriate to the finest installations, at a price that makes it an affordable option for every facility. It is powerful but simple to operate, and the Tascam-standard connectors make it easy to connect to your existing console. All the front panel functions plus an additional rotary control for the production track level are available on the optional remote. Call and order one today. MultiMAX will immediately upgrade your facility to have an advanced surround sound monitoring capability and put you confidently in the middle of the most exciting development in professional audio's future.

Is Quality Audio Dead? from page 1

of audio, not just technology. There is nothing wrong with new technology, we love it. Unfortunately, many designers only measure and never listen to their products. When something measures poorly, it almost always sounds bad. However, many units have wonderful measurements but still sound awful. Critical listening must be the focal point of the audio design process. Another part of good design is ease of use and productivity. Would a mouse and a CRT make a good replacement for a console mixing surface. How about using a QWERTY Keyboard to play the piano?

Unless our industry becomes dissatisfied with the status quo, quality audio will continue to decline. We must change the rules by which excellence is judged. By some standards, such as distortion, frequency response, the number of features and price, today's products are excellent. But these standards have overshadowed more important ones. We must go beyond a limited view of excellence and learning discernment. The best hardware is useless without the discernment to appreciate the difference. Many have confused "cheaper" with "better", and believe that the Golden Age of Audio has arrived.

My motivation for staying in this business comes from the sincere belief that major artistic and technological advances can be made in sonic quality and ease of use. At Martinsound, we want to become agents of change. We will seek to be a conduit from those who know to those who need to know and we will see further by standing on the shoulders of those who went before us. Our job is to provide quality products with the training and understanding needed for our customers to be able to differentiate themselves as lasting contributors in a disposable world.

The Pro Audio industry must find a way to restore the lost art of quality audio. If properly educated, a significant portion of the industry would choose to stand out by using truly professional tools and techniques. We want to enlist the help of others and spearhead a revolution that revives our industry. Together, we need to search out opportunities to advance quality audio. Want to join? My e-mail address is jmartinson@martinsound.com. I would love to hear from you and know what you think.

Joe Martinson
President - Martinsound Inc.

The Value of A Console from page 8

done on other consoles: there's no comparison. The EQ is much better, and the mixes have a nice warm sound."

Andres records with a 32-track ADAT set-up and notes that often, when digital multitracks are combined with other consoles, "you don't get a very pleasing sound; it sounds brittle. Through the Neotek I get nice warm mixes. There's a real perception of analogue."

Stardog Studio: "The mic pre's are very good" Mike Castoro, studio manager at Stardog Studio (Austin, Texas), says that there is plenty of life left in their 56-input Neotek Elite. The console was purchased used in 1993, and is fitted with a VCA automation system. "We spent a week commissioning it," he says, "and the studio has had trouble-free operation from it ever since. "Our clients love it," says Castoro, noting that Jennifer Warnes and drummer Terry Bozzio have booked recent sessions. "It's a very clean sounding console, very clear. The mic pre's are very good," enthuses Castoro. "It's easy to get good mixes with the Neotek, it's just a great sounding board."

Helping You Stand Out from page 2

year-old plate will be in use for many more years to come, as the parts and technology used in the upgrade can be easily supported.

Facilities across the country have chosen to give their EMT plates a new lease on life. During the last 5 years studios like The Hit Factory, Todd-AO, Conway Recording, Chung King, Masterphonics, Mutt Lange's Reach Studio and Starstruck (to name just a few) have all installed our upgrade.

Martinsound delivers extraordinary and innovative audio products, designed through a dialog with industry professionals like you. But we not only listen, we also strive to educate. Using our own talented staff, serving as a conduit for other like-minded individuals in the industry, we are working toward changing the industry back to one which is concerned more with audio quality and artistry than just technology.

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MicMAX: Elite Mic Pre On Steroids

Martinsound
Helping You Stand Out

MicMAX is a state-of-the-art outboard unit

The starting point for the design of the dual channel device was the highly regarded circuitry used in the Neotek Elite mixing console system. The designs that have been used in Neotek consoles over the last 25 years have never been compromised in the choice of components.

As is the practice at Martinsound, every component in MicMAX was subjected to critical, double blind listening tests. There could be no compromises; this needed to be a tool that would allow our customers to match the sounds that they had previously only been able to imagine. In the end, we chose the most expensive polypropylene input capacitors. We used DC servos and 6 regulated power supplies. But above all, the signal path was kept as short as possible, using the smallest number of parts possible.

The result is a state-of-the-art specification with superb sound quality. MicMAX boasts noise near the theoretical minimum and distortion that is practically unmeasurable. Plus, with a +30dBu output, MicMAX has headroom to spare.

by Steve Harvey - Marketing Manager

Steve recently moved from New York to Los Angeles and is editor of Audio Horizons.
sharvey@martinsound.com

Products mentioned in this article:
MicMax, Neotek consoles
Article summary:
An affordable mic preamp that delivers the famous Neotek console sound in a rack unit.

MicMAX is a 1U, dual-channel microphone preamplifier

Input impedance may be optimized for virtually any type of microphone with 500Ω, 1.5kΩ and 10kΩ switch settings. This means that whether you're using a vintage ribbon or a modern capacitor microphone you can obtain the best sound possible by loading the mic to reproduce the source in its pristine glory.

Other front panel features for each channel of MicMAX include switches for phantom power, a 20dB pad, polarity inversion and subsonic filter. Gain is controlled in 5dB steps by 'nudge' buttons, allowing easy repeatability, with a trim pot providing an additional +/-5dB adjustment. Both channels feature an easy-to-read 2-digit gain readout and peak response bargraph meter.

If you share our passion for quality audio and are looking for a microphone preamplifier to help you produce recordings that will set you apart from your competition at a price you can afford, give us a call to see how you can get your hands on MicMAX.

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Reader Response

Martinsound designs, manufactures, sells, and rents innovative and superior audio solutions that hep its customers stand out in professional audio.

Send me more information on:

Neotek Consoles:
- ☐ Elite & Elan page 9
- ☐ Essence
- ☐ Encore

Automation:
- ☐ Audiomate page 9
- ☐ ADR Control Pro &
- ☐ ADR Spotting Pro

Control and Expansion:
- ☐ RMS page 3
- ☐ ACX page 4
- ☐ MultiMAX page 1

High Quality Components:
- ☐ MSS-10 Mic Pre page 7
- ☐ MicMAX Mic Pre page 11

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