



New Products, P. 10, 46

STUDIO | LIVE | BROADCAST | CONTRACTING | POST



NOVEMBER/DECEMBER 2014

ProAudio Review

The Review Resource for Sound Professionals



Innovative Product Award Winners

500 Series

Yesterday, Today & Tomorrow

more reviews:

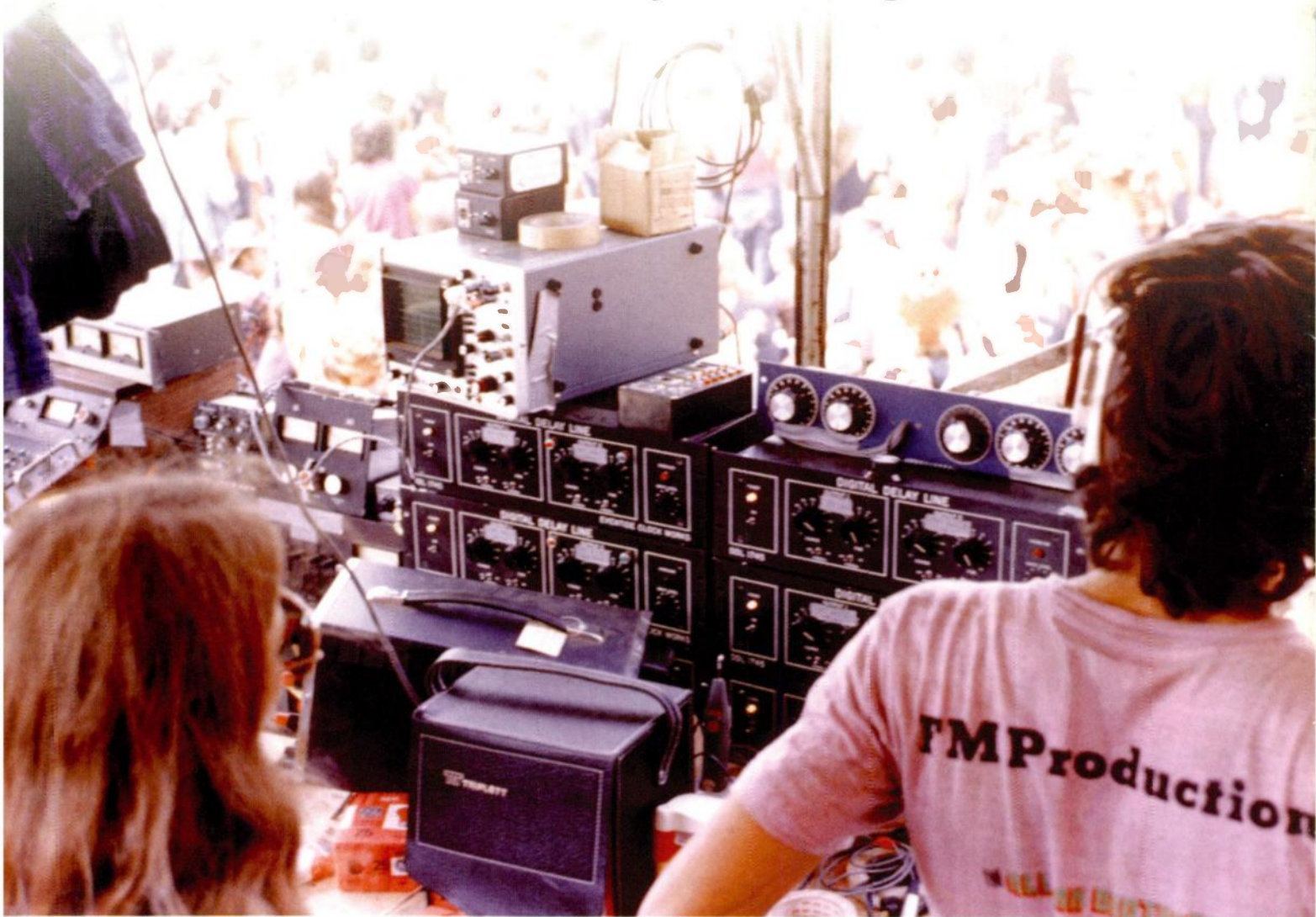
API The Box • Blue Mo-Fi Headphone • Dolby Atmos Mobile • Earthworks PM40 PianoMic System • Electro-Voice ETX • Eventide MixingLink • Focusrite Saffire PRO 26 • Fostex PM0.3/PM-SUBmini • Manley Core • Pearl Priority • Prism Sound Titan • Shure SRM1540

www.proaudioreview.com

Live Review:
Alto Pro Black Series



In 1973, at Watkins Glen, live sound went just a bit digital.



*"In the beginning, audio was analog.
And, almost anything was possible."*

Everything but delay. And so the Digital Delay Line (DDL) was born. DDLs were simple and limited to just delay. Today, forty one years after a stack of Eventide DDLs delayed the audio feeds to the speaker towers at Watkins Glen, Eventide introduces the **DDL-500**. Designed to be 'as analog as possible', the **DDL-500** will make your 500 series lunch box "just a bit digital."

DDL-500

Digital: Just Delay

24-bit
10 sec @ 192 kHz
160 sec @ 16 kHz

Analog: Everything Else

Mix
Input Kill
Feedback
Soft Saturation
Low Pass Filter
Send/Return

Eventide

Eventide is a registered trademark of Eventide Inc. © 2014 Eventide Inc.



<http://goo.gl/63hQzC>

DPA
MICROPHONES

Made in Denmark



d:vote™

Sonic Excellence With DPA

The DPA 4099 Instrument Microphones cover a wide range of acoustic and woodwind instruments, providing a truly natural sound for your recording. DPA has designed ingenious mounting accessories to sit gently and securely on each instrument



www.dpamicrophones.com/dvote

Studio

Covering Recording, Broadcast Production, and Post Production

New Studio Products 10

Reviews 16

Prism Sound Titan USB Audio Interface and Blue Mo-Fi Headphone
by Russ Long

Second Opinion 19

Blue Mo-Fi Headphone
by Tony Ware

Review 20

Earthworks PM40 PianoMic System
by Rich Tozzoli

Review 22

Fostex PM0.3/
PM-SUBmini 2.1
Powered Desktop
Monitor System
by Frank Wells

Special Promotional Feature 23

The 500 List
by PAR Editorial Staff

Feature 26

500 Series: Yesterday, Today and Tomorrow
by Lynn Fuston

Opinion 37

My Magnificent Seven (on The 500 List)
by Russ Long

Reviews 39

API The Box Analog Recording and Mixing Console, Manley Core Channel Strip and Pearl Priority Condenser Microphone
by Rob Tavaglione

39

Reviews 44

Focusrite Saffire PRO 26 Preamp/Interface and Eventide MixingLink Mic Preamp/Effects Loop
by Strother Bullins

Review 45

Dolby Atmos Mobile
by Frank Wells

Mini-Review 45

Shure SRM1540 Headphone
by Tony Ware



22



Sound Reinforcement

Covering Live Sound, Contracting, and Installed Sound

New Live Products 46

Reviews 47

Alto Pro Black Series Powered Loudspeakers and Electro-Voice ETX Powered Loudspeakers
by Strother Bullins

Departments

Technically Speaking 8

The Winds Of Change
by Frank Wells

Special Awards Feature 14

NewBay Media Pro Audio Group's Innovative Product Award Winners
by PAR Editorial Staff

Cover Photo: Lynn Fuston at Vintage King Nashville

Axient has established a new threshold for wireless audio quality and RF signal reliability. Designed to meet the demands of audio professionals, it is the most advanced system for mission-critical applications.

Unmatched Audio Quality

Built on Shure audio engineering history and microphone technologies, Axient delivers the warmth and richness of analog audio with the control and management capabilities of digital technologies – leveraging the best of both worlds.

Frequency Diversity and Interference Avoidance

Axient enables the simultaneous transmission on two frequencies from a single source – ensuring signal integrity. Axient receivers can also detect interference and move to compatible frequencies in fractions of a second – ensuring clean, uninterrupted, audio.

Uninterrupted Wireless Signal

The Axient Spectrum Manager was developed to provide a detailed assessment of the RF spectrum of any environment. It continuously monitors, evaluates, prioritizes, cues, and assigns compatible UHF frequencies to ensure an unbroken wireless signal.

Real-Time Battery Metering

A new comprehensive power management solution was developed for Axient that provides real-time battery monitoring and lifecycle management utilities. Advanced lithium-ion chemistry allows for longer run times, shorter charging cycles and zero memory effect.

Remote Transmitter Control

Axient ShowLink® enables real-time remote adjustments of all transmitter parameters. Make gain adjustments or change frequencies without disrupting the performer or leaving the control booth.



AXIENT

EPIC. WIRELESS. AUDIO.

www.axient.net

© 2014 Shure Incorporated

SHURE
LEGENDARY
PERFORMANCE™

STAY ONE STEP AHEAD

with NewBay Media's **FREE**
Electronic Newsletters

ALL ENTERTAINMENT TECHNOLOGY TOPICS COVERED

Simply visit
www.nbmedia.com
and click on the
"Email Newsletters" link.
Then choose as many
newsletters you need.

FREE!

Sign-up today by visiting
www.nbmedia.com

ProAudio Review

The Review Resource for Sound Professionals

NOVEMBER/DECEMBER 2014

EDITORIAL

Frank Wells, **Editorial Director**
212-378-0400 x535, fwells@nbmedia.com

Strother Bullins, **Editor**
336-703-9932, sbullins@nbmedia.com

Clyve Young, **Managing Editor**
212-378-0424, cyoung@nbmedia.com

Kelleigh Welch, **Assistant Editor**
212-378-0423, kwelch@nbmedia.com

Lynn Fuston, **Technical Editor**

Rich Tozzoli, **Software Editor**

Russ Long, **Senior Contributor**

Steve Harvey, Will James, Liz May, Randy Poole,
Rob Tavaglione, Tony Ware, Sterling Winfield, Dan Wothke
Contributors

ADVERTISING

Charlie Weiss, **Group Publisher**
212-378-0484, cweiss@nbmedia.com
Tara Preston, **Associate Publisher**
917-331-8904, tpreston@nbmedia.com
Janis Crowley, **Sales Director, West Coast Office**
415-505-1985, jcrowley@nbmedia.com
Zahra Majma, **Specialty Sales Associate**
212-378-0400 x517, zmajma@nbmedia.com

ART & PRODUCTION

Nicole Cobban, **Senior Art Director**
Walter Makarucha, Jr., **Associate Art Director**
Fred Vega, **Production Manager**
212-378-0445, fvega@nbmedia.com

CIRCULATION

Meg Estevez, **Group Director, Audience Development**
Michele Fonville, **Associate Circulation Manager**
Subscriptions: Pro Audio Review, www.MyPARmag.com
P.O. Box 234, Lowell, Ma 01853
Tel: 888-266-5828
(U.S.A. Only, 8:30 A.M. - 5 P.M. Est.)
978-667-0352 (Outside The U.S.)
Fax: 978-671-0460
E-Mail: Newbay@Computerfulfillment.com

NEWBAY MEDIA AUDIO GROUP

Adam Goldstein, **Senior Vice President/Group Publishing Director**
Ragan Whiteside, **Web Director**
Robert Granger, **Online Production Manager**
Ashley Vermillion, **Web Production Specialist**

NEWBAY MEDIA CORPORATE

Steve Palm, **President & CEO**
Paul Mastronardi, **Chief Financial Officer**
Rick Ng, **Controller**
Bill Amstutz, **Vice President of Production & Manufacturing**
Robert Ames, **Vice President of Digital Strategy & Operations**
Denise Robbins, **Vice President of Audience Development**
Anthony Savona, **Vice President of Content & Marketing**
Ray Vollmer, **Vice President of Human Resources**
Anthony Verbanac, **IT Director**

LIST RENTAL:

914-925-2449 or danny.grubert@lakegroupmedia.com

REPRINTS AND PERMISSIONS:

For custom reprints & eprints please contact our
reprints coordinator at Wright's Media:
877-652-5295 or newbay@wrightsmedia.com

PRINTED IN THE U.S.A.

Administrative, Advertising,
& Editorial Offices
28 E 28th Street, 12th floor
New York, NY 10016
TEL: (212) 378-0400



THE POWER **TO REACH** YOUR **GOALS**

NewBay Media provides the information you need to know — and the audience you need to reach — in the **Broadcast & Video, Professional Audio, Musical Instruments, Systems Integration, and K-12 Education** markets. Our services help readers, service providers, manufacturers, and associations reach their full potential, and exceed their expectations.

ONE COMPANY. ONE GOAL. YOURS.

We are here to help you succeed in any way we can — whether it is through our unique online and print media or our award-winning events and custom publications.

Learn more at www.nbmedia.com, or contact Steve Palm, CEO, at spalm@nbmedia.com.

 **IN PRINT | ONLINE | IN PERSON**

BROADCAST/VIDEO

TV TECHNOLOGY
RADIO WORLD
VIDEOGRAPHY
DV
GOVERNMENT VIDEO

AUDIO

PRO SOUND NEWS
PRO AUDIO REVIEW
AUDIO MEDIA
CENTER CHANNEL
MUSIC PRODUCTION TOOLBOX

MUSIC PLAYER

GUITAR PLAYER
BASS PLAYER
KEYBOARD
EQ
MUSIC PLAYER NETWORK

SYSTEMS INTEGRATION

SYSTEMS CONTRACTOR NEWS
AV TECHNOLOGY
RESIDENTIAL SYSTEMS
RENTAL & STAGING SYSTEMS
DIGITAL SIGNAGE

K-12 EDUCATION

TECHNOLOGY & LEARNING
SCHOOLCIO
TECH FORUM

For more information on these brands and the many others offered from NewBay Media, as well as subscription information for all of NewBay's print and electronic products, visit www.nbmedia.com.

When you have to know you sound your best.

From professional
audio to automotive:
25 years of audio analysis
with Rohde & Schwarz.

From stereo equipment to CD players to surround systems for home cinema, consumer audio has become a demanding market. Rohde & Schwarz has optimized its solutions to meet the key requirements.

- ▮ The R&S[®]UPV offers developers highest accuracy, resolution and dynamic range when measuring frequency response, distortion, FFT and other characteristics
- ▮ Parallel measurement on up to eight channels makes the R&S[®]UPP, with its excellent dynamic range and accuracy, extremely fast. Valuable time is saved, especially in production
- ▮ The integrated PC makes both instruments extremely compact. The wide variety of interfaces – analog, digital and combined – ensures maximum flexibility

Our local audio experts in over 70 countries are standing by to provide you with in-depth advice. Find out more about our products at www.rohde-schwarz.com/ad/cons-audio/pr



R&S[®]UPP Audio Analyzer

- ▮ Suitable for all interfaces: analog, digital and combined
- ▮ Parallel measurements on up to eight channels
- ▮ Up to 80 kHz bandwidth and 200 kHz sampling rate
- ▮ User-programmable filters for analyzer and generator
- ▮ Compact instrument with integrated PC and low height


ROHDE & SCHWARZ

technically speaking

The Winds Of Change



by Frank Wells

20 years ago, *Pro Audio Review* was conceived by founding editor John Gatski as a sort of *Consumer Reports* of professional audio. I wrote reviews and bench tests for *PAR* from the second issue through the next couple of years until I walked out of the shop at Masterfonics to become the editor of *Audio Media USA*. There have been twists and turns in the audio publishing world since that time—the IMAS group that published *PAR* bought *Audio Media* just before I went to work at *Pro Sound News*. The parent company of *PSN*, NewBay Media, then acquired IMAS in 2008, reuniting me with my *Audio Media* friends and, most notably, with *PAR* staffer Strother Bullins who had worked with me on *Audio Media USA*. Did you follow all that? Never mind, I can barely keep up myself.

Over time, *PAR* was wrapped completely

into the NewBay Pro Audio Group, which eventually came to include *Mix* magazine. While we've endeavored to maintain the unique identities of each title, the changes in our industry (actually, in both the publishing industry and in professional audio) mean that the time has come again for change.

The *Pro Audio Review* brand will live on, but beginning in January of 2015, *PAR* review content in print will be wrapped into the pages of *Pro Sound News*, and will continue to be found online at prosoundnetwork.com. As the print magazines share a common mailing list already, this move is purely practical. Strother, who can be credited with

cultivating the best roster of peer reviewers in our industry, will expand his role, becoming Reviews Editor across the entire AV / Pro Audio division. We are committed to bringing our readers the same quality end-user in-use perspectives that *PAR* readers have come to expect from each issue.

It's been an excellent journey, and we're honored to have had you along. The journey will continue.

As we bring a close to 2014, all of us here at *Pro Audio Review* and NewBay Media wish you and yours the very best in the coming year. Here's to your good health and prosperity in 2015—a virtual toast <clink>.

"It's been an excellent journey, and we're honored to have had you along."

POWERFUL SOUND

Your Source For Low Prices
On The Best Recording Gear

COMPUTER AUDIO INTERFACES • DAW SOFTWARE • MICROPHONES • PREAMPS • SIGNAL PROCESSING • MIXERS

Call a
Sales Pro
Today!



Call 800-356-5844
or shop fullcompass.com

Leading The Industry For Over 35 Years

Follow Us



Request your
FREE
540-page catalog



POST-APOCALYPSE COOKING SHOW



Only two things will survive...



Made in the USA by a Bunch of Fanatics.



« Scan here to learn more.

lectrosonics.com or 1-800-821-1121

In Canada, call 877-753-2876

new studio products

Audio Precision APx555 Flagship Audio Analyzer

Audio Precision has announced a new flagship audio analyzer, the APx555. The APx555 outperforms the company's previous performance leader, the SYS-2700, while blending an update of that device's power user operator interface with the simplicity of the APx style, production-oriented, sequence mode software control. The APx555 extends the analog performance of the APx series beyond that of the SYS-2700, with "the lowest noise and distortion" ever offered in an audio analyzer, according to Tom Kite, VP, Engineering for AP.



The numbers cited to *Pro Sound News* during a briefing on the APx555 include a typical residual THD+N of -120 dB (with the specification a conservative -117 dB). That's 5 dB better than the SYS-2700 and 19 dB better than the closest competition, claims Spyros Lazaris, VP, Sales and Marketing. In mono mode, the measurement bandwidth can extend to 1 MHz. Up to 1.2 million point FFT resolution is available.

Beyond the performance specifications, the APx555 bests the SYS-2700 in interface and clocking capabilities, embracing a wide range of professional and consumer interface types. Jitter generation and analysis capabilities as well as interface signal degradation tests have been expanded with the new hardware.

The APx555 is slated to begin shipping in October. The standard configuration, which includes "Advanced Digital I/O" and the "Advanced Master Clock," will list at \$28,300. The Bench Mode operator interface will be available for the other APx series devices, included in software version 4.0 on all models except the APx515, where the upgrade is \$2000.

Audio Precision: ap.com



AWARD-WINNING ISOLATION STANDS

IsoAcoustics® stands are built with a unique, patented isolation technology that allows your speakers and instrument amplifiers to "float" in free space, letting you hear clear, authentic sound.

I found when using the IsoAcoustics stands under my NS10s that I had an easier time mixing due to a more stable stereo image and clearer bass frequencies.

—Elliot Scheiner, Grammy Award-Winning Recording & Mixing Engineer

Pretty remarkable, ingenious, clever device.... and they work.

—Frank Filippetti, Grammy Award-Winning Producer

I noticed immediately a clarity in the stereo image and the frequency response that had been missing in my NS10's... The IsoAcoustics generally made them more enjoyable to listen to, no small feat as I am sure you know...

— Vance Powell,

Grammy Award-Winning Chief Engineer,
Blackbird Studios



STANDARD & CUSTOM STANDS AVAILABLE

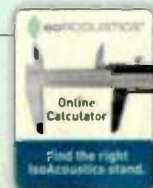
Find the perfect IsoAcoustics® stand for any size and application at www.isoacoustics.com



Check out the NEW MODULAR ALUMINUM SYSTEM

Use the new Online Calculator to find or specify the right IsoAcoustics® stand for you.

www.isoacoustics.com





FOR FOUR DAYS, WHAT'S NEXT IS HERE NOW.

The 2015 International CES. With the who's who of innovation, business and technology, it's the one show on Earth that promises the future. And delivers it in ways you never imagined. Register today at CESweb.org

2015 International

CES

THE GLOBAL STAGE FOR INNOVATION

PRODUCED BY



JAN. 6-9, 2015

LAS VEGAS, NEVADA

CESWEB.ORG

#CES2015



new studio products

Grace Design m905 Analog Monitor Controller

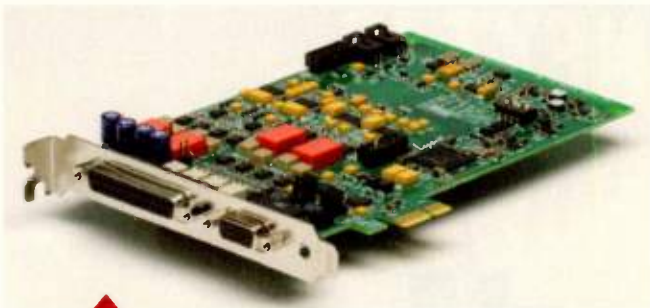
Grace Design has introduced the m905 Analog monitor controller. Based on the original m905, this version offers same exact same design but is intended for users who already have digital to analog converters, but still need analog monitor selection and control.

The m905 Analog is configured with a 2U mainframe Audio Control Unit (ACU) and a sleek desktop Remote Control Unit (RCU). All audio connections are made on the ACU, and all system control is from the RCU. Analog inputs include two balanced via XLR, one unbalanced via RCA and one balanced CUE in via XLR. Outputs include three balanced speaker outputs via XLR, two subwoofer outputs via XLR, balanced CUE output via XLR.

Other features include an LCD operating screen; front panel monitoring functions—volume, speaker selection, dim, mono, mute, L-R, solo, and subwoofer mute/solo; 0.5 dB stepped level readout; talkback feed and a full-time SPL level meter.

Grace has also announced the m905 IR Remote Option, which is available on new or existing units (Digital and Analog). This feature allows wireless infrared remote control of a select set of monitoring controls via the Grace Design Remote, a standard Apple Remote, or with iOS and Android via the Logitech Harmony Remote.

Grace Design: gracedesign.com



Lynx Studio Technology PCI Express Cards

Lynx Studio Technology has introduced their new line of PCI Express Cards, combining the connectivity of the Lynx AES16e PCI Express card with the audio quality of the Lynx Aurora converters. The first two offerings are the E44 and E22 cards.

The E44 (\$1,095, pictured) offers four analog input and output channels and four AES/EBU channels, expanding on the I/O offered by the LynxTWO- A card. The E22 (\$795) offers two analog input and output channels and two AES/EBU channels, essentially the equivalent of the L22 PCI Card. A new software mixer, similar to the one developed for the AES16e and Aurora Thunderbolt, will be available.

Built upon the LynxONE and LynxTWO cards, E44 and E22 performance eclipses that of Aurora converters, offers Lynx. The use of field-programmable-gate-arrays (FPGA) is another core technology pioneered for use in audio devices by Lynx.

Lynx Studio Technology: lynxstudio.com



CAD Audio MH210 Studio Headphone

CAD Audio has expanded its studio headphone line with its MH210 model (\$49 list) featuring a closed-back, circumaural design. Available in black or white (pictured), the MH210 is equipped with high output 40 mm neodymium drivers, a frequency response of 15 Hz to 22 kHz, and power handling of 1000 mW.

CAD Audio: cadaudio.com

MM SERIES

DARE TO DO IT ALL

"These are the most delightfully versatile speakers I've ever had. Great sound and more feature-laden than anything else available. I take them everywhere."

- Jim Fitzpatrick, Emmy Award-Winning Post Production Sound Mixer

"I love these speakers! I was so impressed by the sound details that I use them as my reference monitors in my drum studio and they sound so much dearer than my near-field monitors."

- Fritz Lewak, Drummer

The MM Series speaker system is a professional monitor, amplifier and mixer all in a durably compact, portable design that delivers powerfully clear and uncompromised sound. Incredible clarity and reproduction for studio referencing coupled with inputs and EQ's accommodating a variety of instrument, microphone and AUX combinations for live applications, this All-In-One high fidelity bi-amp reference monitor speaker system is unrivaled in its performance and versatility.

Work. Play. Experiment. Chill.
All of the above.

- Bluetooth® connectivity for wireless music streaming
- Rechargeable battery for up to 20-hrs play time
- Class D Amplifier and EnergyStar® compliant Class V Adaptor



"I found the Sunburst M3BR8 combined surprising fidelity with copious onboard functionality and extreme portability. A lot of punch, clarity and imaging for a compact speaker. Great detail in bottom and high ends with a responsive EQ."

- Stephen Marsh, Mastering Engineer



SUNBURST GEAR

WWW.SUNBURSTGEAR.COM
AN ELITE ACOUSTICS COMPANY

Bluetooth® is a registered trademark of Bluetooth SIG, Inc.

4319 Rowland Ave. · El Monte, CA · Ph: (562) 695-6888 · Fax: (626) 455-0068

2014 WINNER INNOVATIVE PRODUCTS

Selected
by the
readers of

**ProAudio
Review** and **MIX**

First Annual Innovative Product Awards

NewBay Media Pro Audio Group's Innovative Product Award winners are comprised of manufacturer-submitted pro audio products, voted on by the readerships of *Mix*, *Pro Audio Review* and *Pro Sound News*. Read on for why the following products should matter to savvy pro audio types in 2015.

—Strother Bullins, Editor of Pro Audio Review

CONSOLES/CHANNEL STRIPS

Manley Core Reference Channel Strip

To *PAR* Contributor Rob Tavaglione's ears, Manley's new channel strip—featuring preamp, compressor, EQ and ELOP limiter—differs from the iconic VoxBox “in its EQ sections with significant operational and tonal differences. Even if the Core doesn't capture that Pultec-ish passive euphonic “smile” (top and bottom peak only, mid dip only), these Baxandall filters are actually more flexible (boost or cut), though lacking mid-band Q control.”

Solid State Logic XL-Desk

Finally, say many SSL fans: a truly simple and affordable SSL tracking/mixing desk with no DAW provisions. The XL-Desk is a 40-input, 24-channel, 8 buss SuperAnalogue mixer with eight VHD preamps on board plus the legendary SSL Stereo Bus compressor, Listen Mic Compressor and more. The big surprise is an 18-slot 500 Series rack built-in.

PreSonus StudioLive RM Series

PreSonus's StudioLive RM Series is the popular AI-Series digital console gone “UI-less”—just add touch screen. The StudioLive RM Series is the 3U rack-mount RM16AI with 16 Class-A preamps, eight XLR line outs, FireWire 800 connectivity for recording purposes, and comprehensive I/O. Its UC Surface control software is Mac, Windows and iOS-ready.

Neve Genesys Black Console

Genesys Black merges Neve appeal with digital control features. An analog console, the British-built Genesys Black features eight legendary 1073 preamps, 16 monitor channels, eight channels of EQ and compression, built-in converters via MADI, AES and FireWire, plus touchscreen control of all desk parameters, DAW functionality and more.

INTERFACE WITH PROCESSING

Aphex USB 500 Rack

Filling a hole in the 500 Series marketplace, the four-slot USB 500 Rack chassis features a handy monitoring section with dual headphone amps, flexible routing options and—most importantly—USB2 connectivity. As such, 500 Series fans can plug directly into their DAWs of choice, making this Aphex innovation a great option for on-the-go audio pros.

Eventide DDL-500 Analog Delay

The DDL-500 provides beautiful, notably “analog” delay for 500 Series end users. Its lowpass filter, feedback, insert loop, relay bypass and saturation parameters are all analog. Eventide manages to bring the best of its digital expertise to market in this largely analog, single-space module for the hottest-selling hardware segment in all of pro audio.

Softube Console 1 DAW Interface

In his full *PAR* review, *PAR* Senior Contributor Russ Long notes that the Console 1 “is not a DAW Controller. Instead, the surface is an integrated hardware/software mixer that provides control over Softube's full-featured mixer Channel Strip plug-in based on the SSL SL 4000 E console.” Its channel strip is available in VST, VST3, AU and AAX plug-in formats. Apparently, many *Mix* and *PAR* readers/end users agree with Russ: It “provides a creative, intuitive workflow that feels analog, sounds amazing and is amazingly affordable.”

INTERFACES

Antelope Audio Zen Studio USB

Antelope's 1U USB interface offers 12 preamps, clocking features, built-in DSP effects, and more. Marketed as a “grab and go” interface, Zen Studio comes complete with a handle, rugged and attractive build quality, and sleek, user-friendly ergonomics.

Apogee Ensemble 30x34

Thunderbolt Audio Interface

Apogee's latest Ensemble is a 30x34 feature-packed I/O boasting Thunderbolt 2 connectivity. The big story is its 1.1 ms round trip latency performance, coupled with eight preamps, monitor controller with talkback and innovative front-panel guitar I/O features.

MOTU 1248 Thunderbolt Audio Interface

MOTU's flagship Thunderbolt audio interface, the 1248, offers 8 x 12 balanced TRS analog I/O, four mic inputs with digitally-controlled preamps, two front-panel hi-Z guitar inputs, two independent headphone outs and stereo RCA S/PDIF digital I/O. Most notably, it is equipped with ESS Sabre32 Ultra converters, DSPs and a single AVB Ethernet network port. Analog I/O latency has round-trip performance of 32 samples (0.66 ms) at 48 kHz. Each unit provides metering for all inputs and outputs on a large, backlit 324x24 pixel LCD.

SOFTWARE/PROCESSING SYSTEM

iZotope RX4 and RX4 Advanced Audio Enhancement and Repair Toolkit

Starting at \$349 (RX4), iZotope RX4 and RX4 Advanced suites have become quite popular amongst modern recordists for noise and distortion repair tasks via intuitive, largely automated processes. RX4's Advanced package provides even more world-class repair tools for a still-affordable \$1,199.

Universal Audio UAD-2 Satellite Thunderbolt DSP Accelerator

Further enabling audio engineers to work within DSP-heavy productions, UA's UAD-2 Satellite Thunderbolt DSP Accelerator line provides full access to UAD Powered Plug-Ins and its exclusive plug-in brands via QUAD and OCTO models with four and eight SHARC processors, respectively. These DSP Accelerators can also be integrated alongside Apollo Twin, Apollo, and Apollo 16; *PAR*'s Russ Long calls the Apollo line "Truly one of the most versatile pieces of equipment available today."

LOUDSPEAKERS/SYSTEM CONTROL/STANDS

PMC QB1-A Reference Monitors

Built to fill soffit-style main studio monitor applications, this truly world-class powered speaker features analog and digital (up to 192 kHz) inputs, DSP control, the latest PMC drivers and 4,825 W of Class D amplification. Clearly the QB1-A is for

discriminating tastes: Hollywood's Capitol Studios has installed two pairs, updating both its Studio A and Studio B facilities.

Elite Acoustics Sunburst Gear M3BR8 Monitor

A true jack-of-all-trades powered speaker product, the very portable M3BR8 by pro audio newcomer Sunburst Gear offers a uniquely broad range of applications based on its comprehensive feature set. Featuring a bi-amped, two-way compact design, the M3BR8 offers three channel inputs and accepts XLR, quarter-inch and eighth-inch TRS and Bluetooth signal input. It's well at home in the project studio, small music venues or anywhere musicians and audio types provide audio entertainment.

IsoAcoustics Modular Aluminum Isolation Stands

The Arista aluminum isolation stands are aesthetically pleasing to those wanting a non-polypropylene-type solution, yet still use IsoAcoustics' patented IsoAcoustics "floating design." The Modular Stands "markedly enhance sound clarity and performance of studio monitors, subwoofers, sound reinforcement loudspeakers, and guitar, bass and other musical instrument amplifiers in both large and small scale venues," notes IsoAcoustics marketing materials. It uses the company's patented isolation technology, "allowing the speakers or subwoofers to float in free space."

MICROPHONES/WIRELESS/ACCESSORIES

AEA N22 Ribbon Microphone

AEA's N22 phantom-powered ribbon microphone is part of the company's NUVO Series of ribbon mics and was designed for the singer/songwriter, confirms the company. Reportedly ideal for close-up miking "without the boominess or pop-filters that other microphones create," the N22 is marked by an emphasized upper-midrange that is "intended to make instruments cut through in a busy mix and to bring out critical sound characteristics of voices and string instruments."

Audio-Technica AT5045 Condenser Microphone

A-T's 5000 Series is now a proper series, with the AT5045 joining the award-winning AT5040 as its thin yet most certainly large-diaphragm side-address condenser sibling. Hand-built and meticulously inspected, the AT5045 features Audio-Technica's largest single diaphragm available—a two-micron-thick, vapor-deposited gold rectangular design. Features include exceptionally low noise, high SPL capability (149 dB SPL max) and a dynamic range of 141 dB.

DPA d:screet Necklace Microphone

From \$650 street, the d:screet Necklace features DPA's awesome 4061 omnidirectional miniature capsule, handling up to 154 dB SPL before clipping, embedded in a pliable rubber necklace-length cord (18.3 or 20.9 inches in length), available in black, white and brown. It attaches much like a necklace, with an "insert and turn" clasp, and is bolstered by magnetic components: one try and you've figured it out. It's ready for essentially any pro-grade wireless system with a bevy of purchasable adapters; an XLR adapter is even available for wired use.

Radial J48 Direct Box

The Radial J48 is a phantom-powered active direct box with a notably linear response, a 20 Hz to 40 kHz frequency range, low distortion, high headroom and a rugged, road-ready design. Radial holds a large percentage of the DI/analog I/O market, and the J48 is good evidence why.

Shure GLXD16 Guitar Wireless System

Shure's super-cool guitar-optimized wireless package features the GLXD6 Guitar Pedal Receiver with an integrated tuner plus a bodypack transmitter with lithium-ion rechargeable battery. Built in a rugged metal chassis, the pedal offers a built-in chromatic instrument tuner with both strobe and needle tuning views.

by Russ Long

PAR Senior Contributor

rlong@nbmedia.com



Prism Sound Titan USB Audio Interface and Blue Mo-Fi Headphone

In addition to an in-depth look at Prism Sound's Titan USB Audio Interface, this month I detail my experience with Blue's latest product, the Mo-Fi powered headphone with built-in amplifier.

Prism Sound Titan USB Audio Interface

I've reviewed several variations of Prism AD/DA products since my first introduction to the company over a decade ago. Since then, I remain amazed by the brand's sonic performance and overall build quality. Introduced a year ago, the Titan (\$4,950 street) is no exception: it continues the Prism tradition of pristine audio performance within a well-built interface, this one being USB-centric.

Features

With the exception of its beautiful, glossy white finish, the Titan looks nearly identical to its elder sibling, the Orpheus mobile recording interface. The Titan's 1U-sized rack ears are removable so the interface looks elegant and natural on a desktop, too.

Its simple, clean front panel includes a pair of instrument input jacks, a large rotary encoder, two headphone output jacks with independent volume controls,

a meter panel and several status indicator lights. The large encoder acts as a customizable mute switch when pressed. It can be assigned to mute any configuration of analog and/or digital outputs.

The eighteen-input, twenty-output Titan features eight analog inputs (four with microphone preamps), 10 digital inputs, eight analog outputs (perfectly suited to handle any mix configuration from stereo to 7.1 surround), ten digital outputs and two pairs of mirrored headphone outputs, each with its own independent volume control. The Titan is powered via an IEC input connector that accepts 90-250 VAC.

Incorporating Prism Sound's respected clocking technology, the Titan is natively compatible with Mac OS X (10.4.11 and later Intel machines), iOS, Linux and Android platforms and with Windows (Vista, 7 and 8, 32 and 64 bit) with an ASIO driver. Mac-based systems support multiple Titans via

aggregate I/O arrangement (currently not available for Windows users). The Titan is also capable of operating as a standalone AD/DA utilizing ADAT, S/PDIF or AES3 I/O. Set up for standalone operation, Titan can be detached from the host computer and used autonomously. Settings are retained when it is powered down; if they don't need to be changed, connection to a computer isn't necessary.

Rear-panel audio I/O connectivity includes combo connector XLRs for the first four channels (with four mic preamps) followed by four quarter-inch TRS jacks for line-inputs 5-8 and eight quarter-inch TRS jacks for the eight line outputs. The ten digital I/O connections include two RCA jacks configurable for both S/PDIF and AES3 signals (up to 192 kHz) in and out, two TosLink optical sockets configurable for S/PDIF or ADAT in and out. The ADAT configuration includes automatic SMUX/2 coding which allows four channels of ADAT I/O at double sample rates. The Titan includes a pair of XLR-to-RCA cables to connect AES3 equipment. Wordclock sync I/O (via BNC



Here, Russ Long pairs the Titan with MacBook Pro and Blue Mo-Fi headphones for a "truly good as it gets" USB mobile production system.

connectors) is also found on the rear panel.

A blank panel hides Prism's Multichannel Digital Input and Output (MDIO) expansion slot system. The MDIO slot allows the Titan to accommodate other optional digital interfaces such as Pro Tools HDX and AES3 (and hopefully soon, Thunderbolt). The Pro Tools HDX option is particularly exciting to me; it would allow me to use the Titan as my primary I/O in my commercial facility—equipped with a Pro Tools HDX system—and then take it home for editing or tweaking mixes with my MacBook Pro via USB. The MDIO slot will keep the Titan from becoming obsolete as new interfaces are developed. The Ethernet port—officially "reserved for future use," reveals Prism—will likely be programmed for AVB capability.

All of the analog inputs and outputs are electronically balanced and all eight inputs have the Prism Sound Overkiller limiters built-in. When activated, the Overkiller employs a temperate limiting as the signal approaches 2 dB below the point of clipping; in effect, it handles peak transients in a way similar to analog tape. My first experience with the Overkiller Limiter was while reviewing Prism's ADA8XR nearly a decade ago,

and I've always loved the way it sounds on drums and percussive instruments; when pushed ever so slightly, it adds wonderful analog tape character.

The free Prism Sound USB Audio application is compatible with both Mac and PC computers and is a simple installation on either platform. It provides complete control over the Titan's built-in mixer and other functions including the mic pres, which are adjustable in 1 dB steps and provide up to 60 dB of gain. Each preamp has switchable phantom power and -20 dB pad; all eight of the analog inputs have a selectable 80 Hz high-pass filter and polarity reverse. The first two preamps also have front-panel instrument input sockets and the option to activate RIAA Equalization. For example, a turntable can be connected for archiving, playback or sampling applications, making the Titan a prime option for an audiophile's listening room.

In Use

The Titan's sample-rate converter allows the system's operating sample rate to be converted into any other sample rate through a digital output or any sample rate to be

converted to the system's operating sample rate through a digital input, all in real time. This feature can be very useful; for example, a 44.1 kHz output can be produced when the system is running at 96 kHz. There are no noticeable artifacts and activating the function is as simple as clicking a mouse. I used this feature to record the 48 kHz output of a keyboardist's virtual synth into an 88.2 kHz session without DA/AD conversion. It worked wonderfully.

The mic preamps are clean, transparent and extremely quiet yet not sterile; to my ears, they are reminiscent of the Millennia Media HV Series preamp. I used them to record a simple drum kit setup that consisted of a kick (AKG D112), snare (Heil PR22), and overhead (Royer SF-12) and the result was fantastic. Bass sounds great through the front panel's instrument inputs. The low frequencies are punchy and tight with smooth, natural transients. The instrument inputs work equally well recording keyboards. I used a pair of mic inputs to record an acoustic guitar with an Earthworks SR77 pair and the result was wonderful. I engaged the high pass filters but otherwise there was no process-

ing done to the signal and the result was a beautiful, rich stereo recording with wonderful imaging and amazing dynamics. Its preamps are extremely quiet; even the softest fingerpicking was noise free. Latency-free monitoring is derived from the USB Audio app and is a breeze to setup on the fly. It provides the ability to create an individual local mix of any variation of inputs to any combination of output.

Mixing through the Titan is a pleasure. The imaging on the stereo outputs is pristine with stunning depth and clarity and the headphone amps sound detailed and pure from the softest setting to stunningly loud volumes. The flexible internal routing and mixing capabilities make the box perfectly suited to native systems requiring input and output routing where immaculate sound quality is required and low latency monitoring is an issue.

Summary

The Titan is truly as good as it gets for USB interfaces. In terms of pure sonic quality,



The free Prism Sound USB application provides complete control over Titan's built-in mixer, mic pres, and more.

I'd happily put it next to anything commercially available today, feeling confident that it would stand its ground. Its eight analog inputs are more than enough to handle most overdub situations and the impressive mic preamps on the first four eliminate

the need for more outboard gear. While its nearly \$5,000 price tag is higher than most I/O devices with a similar number of inputs and outputs, have one playback session with the Titan and you'll know why.

Contact: Prism Sound | prismsound.com

Blue Mo-Fi Headphone

There are a lot of similarities between microphone and headphone construction,

and there have traditionally been many brands (including AKG, Audio-Technica,

Sennheiser, Shure, Sony, etc.) doing an excellent job of building both. So it came as no surprise to me that, after two decades of industry-leading microphone design, Blue has finally entered the headphone market. As with so many of their microphone designs, Blue has committed to doing it like it's never been done before.

Mo-Fi (\$349 street) is the first active pair of headphones whose active circuit was created with the purpose of efficiently powering the headphones. Playback devices (iPods/digital players, smartphones, tablets, etc.) continue to shrink and their amplifiers are often compromised. For that reason, Blue has implemented a high-quality amplifier in Mo-Fi, guaranteeing sufficient power regardless of the playback device.

Features

Mo-Fi is exquisitely packaged, and it only took me a few minutes to figure out its operation. Since they are active, they require power. Rather than requiring regular battery replacement, Blue



Mo-Fi's active circuit was created to efficiently power the headphones.

incorporated a rechargeable battery into Mo-Fi, chargeable via USB via included AC charger, computer or other USB power-providing source. Mo-Fi can operate for approximately twelve hours before needing a recharge; a full charge takes about three hours. To save battery power, Mo-Fi automatically mutes itself when its ear cups touch together. Each ear cup has a built-in LED indicating full charge (steady glow), 15 percent or less battery left (fast blink), charging (slow blink), and power off (off).

Mo-Fi has three different modes of operation: Passive, On and On+, selected by a three-position switch located by the headphone cable jack. In passive mode, Mo-Fi operates as a normal headphone utilizing an externally-amplified source. Setting the switch to On activates the built-in amp, perfectly matched to drive the headphone's 50mm fiber-reinforced dynamic drivers.

In Use

When listening through my Benchmark DAC1 headphone amp, the sound quality between the on and off position is almost

Second Opinion: Blue Mo-Fi by Tony Ware

Looking like the perfect starter for a Cyberman Halloween costume, the Mo-Fi closed-back headphone features an adjustable multi-jointed tension-and-suspension system that is claimed to adapt to any head shape and size to assure superior comfort and sound.

What sets the Mo-Fi apart, beyond the springs and swivels, is an all-analog amplifier to bolster the 15 Hz-20 kHz response through its 50 mm drivers. While useful as a high-quality passive headphone, employing its amp is recommended and easy. In the "On" mode, the result is far from subtle: there sounds to be an ever-so-slight level bump in the mids and upper bass, but not so much that it throws off its overall relatively-flat tonality. There is no internal DAC paired with the Mo-Fi amp, so consider source-format limitations. That said, I'd happily do some critical listening (though perhaps not record) with these, but in more stationary circumstances. They're surprisingly comfortable, isolating ears quite well, but weighty at over 1.03 lbs.

What Mo-Fi sacrifices in portability it makes up for in muscular performance. In use, set your consumer products' source volumes at a minimum, as headroom and details are quickly elevated via Mo-Fi. This unique studio-grade headphone is, well, quite empowering if you're working off iOS/mobile or laptop devices sans outboard headphone amp.

as extreme as the bass overload that I've heard in ubiquitous Beats headphones, yet more bass than normal. It's generally not my preference, but the "kids" will love it; I've actually found it to be quite nice when listening at particularly low volume levels or reliving my high-school years by revisiting the many bass-anemic album releases from the '80s.

me at all; they are so comfortable that the weight is never an issue.

Like many of today's headphone designs, Mo-Fi is equipped with removable cables. Two cables are included: a standard 3 m cable and a shorter 1.2 m cable that includes Apple iPad/iPod/iPhone controls. A quarter-inch adapter is included as both cables have eighth-inch connectors.

After two decades of industry leading microphone design,
Blue has finally entered the headphone market—doing it
like it's never been done before.

identical (except for a volume change) but comparing the same source through my iPhone's headphone jack reveals that Mo-Fi sounds massively better in the on position. I believe this reflects the mobile device's underpowered nature—a general lack of ability to effectively drive 50 mm headphone drivers. This sound quality difference becomes even more apparent at higher volume levels.

While using On+, the third switch position on the ear cup, a bass enhancement circuit is added to the built-in amp. It's not

Mo-Fi's design is extreme. I doubt if anyone will think they look "okay"—you'll either love them or hate them. Once on your head, though, users will realize that the design has purpose; Mo-Fi is adjustable, extremely comfortable and they are uniquely designed to ensure that, regardless of cranium size, its ear cups will always be in the prime position. Mo-Fi's negatives also reside in the design category: they are arguably cumbersome and comparatively heavy. Yet while this may be a problem for some, it hasn't bothered

Summary

Mo-Fi sounds great and wears comfortably. They offer smooth, natural performance at any volume level. As such, they are a pleasure to listen to, even over long periods of time. They have the ability to reproduce music at exceedingly loud volume levels without distorting and are reasonably priced. They also provide exceptional isolation, which makes them a great recording musician's headphone.

Contact: Mo-Fi | www.mofiheadphones.com

Fostex PM0.3/PM-SUBmini 2.1 Powered Desktop Monitor System



by Frank Wells

PA's Editorial

Director

fwells@nbmedia.

com

It's been a long time since I've reviewed any "value-priced" speakers, mainly because I'm spoiled for choice and have high expectations and standards for monitor loudspeakers. When the Fostex PM-SUBmini was introduced at this year's InfoComm, something about the combo of the sub and a PM0.3 left/right pair seemed promising. While not perfect, they have not disappointed.

Features

The PM0.3 (\$99 per pair, street) offers two rear-ported cabinets, roughly 4- x 7.3- x 5-inches each, weighing 1.5 lb. The LF driver is a 3-inch cone and the HF driver is a 3/4-inch soft dome tweeter. Twin 15 W amps are housed in the left/active monitor; one feeds the components housed with it while the other feeds the second monitor (connected via eighth-inch jacks). The passive crossover is centered at 2.65 kHz. Rated frequency response is 110 Hz to 20 kHz, +/- 3 dB. Input is unbalanced via an RCA jack pair or an eighth-inch TRS jack. The powered speaker has a DC input for the provided line-lump supply.

The sealed PM-SUBmini (\$150 street) is 7.9- x 7.3- x 9.2-inches and weighs 16.3 lb. Its 50 W amp feeds a 5-inch woofer. Input and through (to feed the PM0.3s) are RCA jack pairs. Power is direct AC in (two-prong).

Controls are minimal on both cabinets: a rear-panel volume/power switched pot on the PM0.3s, a volume knob and 180° polarity reverse on the PM-SUBmini and a final sub crossover frequency control. The crossover control sweeps from 60 Hz to 150 Hz, with about 70 Hz the recommended setting for use with the PM0.3. The LF is somewhat boosted at the higher crossover frequencies.

In Use

Fidelity is good. Imaging is good but not superlative. Frequency performance is decent: flat enough to not make me twist my head when listening. The PM0.3s are voiced a touch bright—more noticeably at higher listening levels. Dynamics are satisfying. Volume out (without watching those little woofers flap and obviously distort) is more than sufficient for close near field/desktop use, though there's not the headroom for other applications. Another LF octave would be nice, but a bit too much to hope for given the package. The LF can be smoothed out by playing with the levels and crossover controls. I would not use the PM0.3s without the sub. I wish the LF roll-off could be controlled on the PM0.3 so I could let the sub do a little more of the work.

Summary

I could buy this set up at retail for \$250. I haven't experienced anything at that price that would perform at this level; everything else I've tried in that range would have been quickly set aside.

When I'm reviewing monitors, I listen to a compilation CD that I've used for decades. I listen over and over, volume up, volume down. I'll listen critically at an optimum (85 dB-ish) level to the whole disc critically at least once, then let it roll whenever I am at my desk, turning it up and down appropriate to my workflow. Essentially, if a performance aspect attracts my attention, that's usually negative. If the music just makes me happy, the little nuances and fills tickle my ears, that's positive. Mostly, I'm in the positive camp with these.

What did I expect from the combo? Less than I got, for sure. For small footprint desktop use, maybe on that desk where you pay your bills, the PM0.3 and PM-SUBmini system is a nice package for less than critical applications, and it won't do much damage to your checking account.

Contact: Fostex USA | fostex.com/usa





THE 500 LIST



A PAR SPECIAL PROMOTIONAL FEATURE

FROM THE
PUBLISHERS OF

**ProAudio
Review**
The Review Resource for Sound Professionals

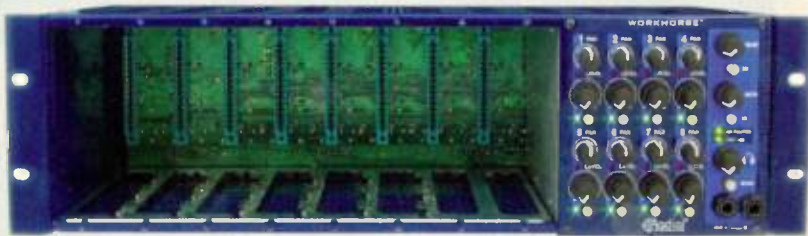
prosound NEWS

MIX
MIX PUBLICATION - LIVE SOUND - SOUND FOR PICTURE

Radial 500 Series Racks... More of Everything!

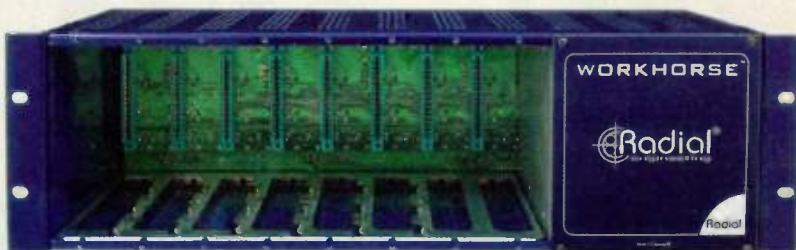
More Performance!

The Workhorse™ - an 8 channel power rack with built-in summing mixer! Lets you combine modules in series or in parallel with more efficiency to deliver creative results that let your mixes stand out. D-sub, XLR and ¼" TRS connectors for cross patching are included!



More Flexibility!

The Workhorse WR-8™ - designed for those with mixers in place, the WR8 gives you 8 channels to house your 500 series modules and lets you upgrade by adding the Workhorse mixer section later. Fully backwards compatible to older 500 series formats.



More Power!

The Powerhouse™ - This 10 space power rack delivers 1600 milliamps of current for extra headroom while maximizing your studio space. Built-in feed and stereo link switches make it easy to integrate with your recording system.



More Convenience!

The Powerstrip™ - Single rack space Powerstrip lets you assemble your favorite preamp, EQ and compressor to create the ultimate channel strip. Use it in the studio or take it on the road!



More Easy!

The Cube™ - This small wonder gives you a more easy and affordable way to enjoy the fun and excitement of 500 series mixing, combining up to three modules to create all new sounds! Place the Cube on your work surface, carry it around the studio with the built-in handle or build it right into your desktop with the optional mounting flanges.



More Options!

The NEW Six-Pack™ - Desk-top power rack for 500 series modules lets you mix and match up to six modules and safely power them to create stereo channel strips or unique signal chains. The powerful 1200 milliamp supply will not sag when loaded. Set the SixPack down on your work surface or carry it around the studio with the integrated handle.



"Every connection and function worked as promised. The Workhorse is truly professional grade and worth the cost."
~ Pro Audio Review



"The Workhorse is one of the most versatile and well equipped racks I've ever tried. It exudes the typical Radial Engineering detail and thoughtfulness..."
~ Sound-on-Sound



"Radial can't seem to leave well enough alone! Oftentimes, they take what might be otherwise mundane and turn it into a must have."
~ Tape Op



"The Workhorse certainly lives up to its name. The feature set is deep, the system is scalable, construction is solid and it sounds great"
~ Mix



"The Workhorse makes a terrific host for modules - solidly built with useful routing features and extensive connectivity."
~ Resolution



"No other manufacturer currently offers anything like this level of functionality in a 500 series rack."
~ Audio Media



"From its build quality to its feature set and open-ended architecture, the Workhorse is currently unrivalled for supremacy."
~ Recording



"The Workhorse is a more sophisticated, more capable, and more costly re-thinking of what a 500-series rack frame should be."
~ Electronic Musician



"Radial is to be congratulated for putting plenty of thought and design smarts into such a compact and attractive package."
~ Audio Media



QR VIDEO LINK

www.radialeng.com

1518 Hebert Way, Port Coquitlam BC V3C 5M5 Tel: 604-942-1004

Radial
engineering

...power tools for power players™

BLUE SOUNDS BEST



FEATURING THE ORIGINAL **AIR BAND®**

"If Cliff Mäag at Mäag Audio® makes it, I use it. Every hit, Every #1, Every Grammy mix I have ever done featured his EQ."

-Dave Pensado
Grammy Award-winning Mixer

Available as a plugin!



EQ4

EQ2

PREQ4



500 SERIES: YESTERDAY, TODAY AND TOMORROW

Toys or tools? Compromised facsimiles or innovative diminutive hardware? Is the 500 Series analog processor format hamstrung by its original specs or can it be pushed to new heights by clever designers?

Special Feature by Lynn Fuston,
PAR Technical Editor, lfuston@nbmedia.com

From Whence It Came

Beginning in 1966, Saul Walker designed audio components for his start-up company, Automated Processes Inc. (API). These components were modular building blocks like preamps and equalizers that fit into uniformly sized “slots” in the consoles API produced. Due to the overwhelming popularity of the consoles, some engineers in the mid-1970s started making home-made racks to house their personal API modules, perhaps inspired by other companies making similar but incompatible modular rack systems, like Allison Research/Valley Audio and dbx.

In 1978, Datatronix (producing API products at the time as API was out of business) made a 10-slot rack. Marvin Caesar of Aphex also decided to build a 500 Series rack that would fit his Aphex CX1 Comp-Gate and the EOF-2 Equalizer. The rack and pin configuration was similar enough that API modules would work in it. About the same time, Art Kelm (Ground One) originated the name “Lunchbox” while using an Aphex rack to create a modular channel strip featuring a preamp, EQ and compressor for customers (including Steve Perry of Journey, for example) so they could have their own consistent sound.

In 1985, Aphex decided to discontinue their 500 Series rack about the same time that Paul Wolff—then a Datatronix employee—became the new owner of API. Wolff (today with Paul Wolff Designs) received approval from Caesar to make 500 Series



racks under the API brand name. API produced the Lunchbox as well as 2- and 10-slot versions from that time until the present.

In 2006, partly as a result of the explosive growth of third-party 500 Series racks and modules, API's new owner, Larry Droppa, launched the VPR Alliance, an open-source, free initiative designed to implement uniform standards and approve manufacturers of 500 Series components. According to Droppa, VPR certification involves submitting a production version of the unit to API, which then tests it to make sure it conforms to size standards, fits in the slot and draws under 130 mA. There is no fee for this certification process. The VPR certification has helped with regards to uniformity (instead of having modules that don't quite fit) yet there are still manufacturers (quite a few, actually) that do not seek certification.

Growing Up

Looking forward from the year 2000, I doubt anyone could have foreseen the impact that the 500 Series format would

have, either on product designs or sales. Like many technologies—conceived for one purpose and adapted for others—the format has far exceeded its original intent and has now taken on a life of its own, but not without some growing pains.

I believe the format is similar to two other historical audio precedents. First was the Compact Cassette, a pocket-sized tape transport case that was intended as a portable equivalent of a reel-to-reel recorder. With a tape speed of 1 7/8 ips and originally designed for dictation, no one could have imagined that the cassette would become a dominant force and high quality option for music recording and distribution. Gradual improvements like advanced tape formulations and Dolby B encoding allowed the cassette to become a very capable recording medium.

Another analogy is audio plug-ins for DAWs. In the early days, they were pale imitations of their hardware counterparts—workable but not great. Today, nearly 20 years after their introduction, plug-ins have improved and are accepted as standard

workhorses in our industry. Some emulations/creations offer more features and are even preferred over their hardware counterparts. So, in much the same way, the humble 1.5- x 5.25-inch 500 Series slot has become a very powerful option for designers and engineers.

The Spec

Over the years there has been some criticism of certain parts of the 500 Series' technical specs, specifically the voltage and current standards. According to official VPR Alliance specifications (dated 8/28/06), voltage is +/- 16 V and 48 VDC for phantom and current is 130 mA per slot. For designers accustomed to working with power rails up to 24 VDC or higher, this voltage spec seemed challenging at first, while others still feel that the current spec is insufficient. Keep in mind that the spec was originally designed to power one thing—API modules—and was never envisioned as an open platform to accommodate all manner of audio hardware. Only through the vision and problem-solving abilities of talented

HV-32P HV-35P The portables*



* BATTERIES NOT INCLUDED

Packed into rugged aluminum chassis and powered from 12-15 VDC so they can go anywhere, Millennia's new portable preamps bring you the clarity of the acclaimed HV-3 in two flavors: the dual-channel HV-32P, with two 200 Series HV-32 preamps on board, and the HV-35P, a portable version of our 500 Series HV-35 preamp.

Carry them with you, stack them horizontally or vertically, bolt three of them into a Middle Atlantic rack shelf—these preamps are designed to deliver Millennia quality from desktop to treetop.

Millennia
Music & Media Systems

www.mil-media.com



designers/manufacturers have we seen the exponential growth of possibilities in this tiny space.

How significant is the rack itself, the true backbone of the 500 Series format? In a word: very. While some older custom racks did not meet the original API spec (pre-VPR), most do today. One upside of having a stock powered rack is that it allows manufacturers to forego UL, CSA and CE certification so they can spend their time and energies primarily on audio functions instead of power supply design and certification.

With so many 500 Series rack options available (over 50 manufacturers by my count), there are still reports of underpowered racks. Those in question work with a few modules but suffer sonically when filled or will not even power up multiple current-hungry modules. Some newer racks offer beefier power supplies with capabilities exceeding the 130 mA per slot spec, up to 400 mA. Anyone planning to spend thousands of dollars on modules should carefully research the options when choosing a rack.

How Do They Sound?

Today there are still those who don't see 500 Series modules as audibly serious contenders—definitely not up to the standards of their full-sized, rack-mounted brethren. True or false?

After eight years of research, here's my take. Making a 500 Series equivalent of a standard rack unit is not without its perils and some attempts are indeed sonically compromised.

But some 500 modules definitely hit the mark. The very first time I ever encountered a rack unit that was morphed into a 500 Series module and sounded "identical" to the rack unit was the Great River MP500NV, sibling to the full-sized MP2NV that I had been using on every session for over 10 years. I did side-by-side testing between the two and was unable to discern any difference at all. How was that accomplished? According to Great River's Dan Kennedy, "by not changing any components or the transformers."

Many manufacturers have to use smaller transformers or possibly forego shielding to squeeze the components into a single 500 Series slot. Great River got around that by not fitting into a single slot. "The transformer itself wouldn't fit in a single slot, so I took two," explains Kennedy. "Then it was easy." While some 500 Series buyers may be reluctant to give up two slots for a single device, I personally would rather have it sound right than be half as big. "Also paying careful attention to a power supply circuit that regenerates and regulates the rack's power to a stable +/-24 VDC—just like the rack units—was important."

One of the things that will make 500 Series believers out of old-school engineers (like me) is integrating features in 500 modules that previously never existed in the rack equivalents. For instance, I've used two Millennia 8-channel preamps for years, the original HV-3D and the newer HV-3R. Both are incredible for orchestral recording and I use them for drums, percussion and vocals as well. However, I frequently have to patch in external EQ to accomplish hi-pass filtering for low frequency issues such as AC rumble. Apart from that, I can typically go from preamp to recorder input, which

THE 500 LIST

is my preference. Guess which preamp has a hi-pass filter on it? Not the \$4,000 Millennia HV-3D or the \$5,000 HV-3R, but the \$700 single channel HV-35. Add to that a Ribbon Mic mode (+10 dB), pad (allowing down to 1 dB of gain, which is great for when I put an R-122 on kick drum) and the Instrument Input—each not available on the multichannel units—and the HV-35 is a unit I'd actually prefer over full-sized rack gear, especially since they sound just the same to my ear. Checking the specs, the racked HV3 will output +32 dBu vs +28 for

into technical details but according to Scott, they used "a complex little DC-to-DC converter to step up from 16 VDC to 300 VDC at a very high frequency (280 kHz), which makes it very quiet, that allows 250 VDC at the plate and 12 VDC for the filament." The current limitation of 130 mA per slot was overcome by utilizing two slots, which upped the current allotment to 260 mA. One of the few concessions was not using the tube output stage of the big-brother 992 since two tubes wouldn't fit; the single full-sized 12AX7 tube is used for the preamp

format, as with the Millennia HV-35. Moog's recent 500 Series Analog Delay and Ladder Filter are great examples. The Aphex 500 Series rack with integrated USB is another prime example; I haven't seen too many racked preamps/EQs with USB. The popularity of the format is encouraging manufacturers to attempt things they haven't before, like Crane Song's first tube entry, the Syren tube preamp. A few of my other favorites are Shadow Hills' Mono Gama (having three transformer options is wonderful), Inward Connections' Brute optical

One of the things that will make 500 Series believers out of old-school engineers is integrating features in 500 modules that previously never existed in the rack equivalents.

the HV35, will take 5 dBu more input level (+23 dBu vs +18 dBu), and the HV3 is 3 dB EIN quieter than the HV35, -133 vs -130 dBu, respectively.

Another revolution was the first 500 Series module that featured a tube stage. Running a tube that requires 250 VDC on a +/- 16 VDC supply might seem impossible, but that is what engineers are for: accomplishing the impossible. It was a challenge, one that father/son team Mark and Scott LaChapell accepted for the LaChapell 583 tube preamp introduced in 2006. I won't go

gain stage with transformers in and out (Cinemag/Jensen, respectively). With no room for the transformer DI input, an active stage was successfully substituted. I have used the now-discontinued 583 for many recordings and it's a very sweet piece of gear that doesn't sound compromised in any way. Presently there's a double-slot 583e with EQ and the newest 583s Mk2 that fits in a single slot.

As more manufacturers jump on the 500 Series bandwagon, more R&D money and innovative features are seen first in this

limiter and, of course, the API 550A EQ. With just those three to work with, I could be a very happy man. Others I am curious about but have yet to hear include the AnaMod AM660 (Fairchild), Chandler's Little Devil compressor and the Pendulum OCL 500.

What's Next?

When asked about his hopes for the future, Larry Droppa from API mused, "I hope the format stays viable, that people recognize the positives of that form factor: portability, ease of use, easy to swap modules. It has

FORWARD-THINKING AUDIO GEAR

www.davehilldesigns.com
www.cranesong.com



Dave Hill, the man behind Crane Song and Dave Hill Designs, is known for creating forward-thinking audio gear with a distinctive character. Crane Song's mic pres, signal processors, converters and plug-ins have the color and flavor you need to deliver stellar-sounding audio everytime.

The Falcon 500 Series compressor combines vintage tube warmth with modern flexibility. The Syren 500 Series tube preamp lets you select a clean, transparent sound or a colorful vintage vibe. The Titan is a compressor-limiter for transparently controlling dynamic range, with a broad palette of sonic coloration options. And for mixing in Pro Tools, the Phoenix II AAX tape emulation plug-in, the RA compression/distortion plug-in, and the Peacock vinyl emulation plug-in bring analog-style vibe and energy to in-the-box mixing.

Paint any sonic picture you can imagine with world-class audio gear from Crane Song and Dave Hill Designs.

To purchase these fine products, email sales@transaudio.com



become—purposely or otherwise—a form for some innovative and interesting pieces of audio gear. It allows an engineer, or even a hobbyist, to manufacture a piece of gear without having to worry about the periphery of power supplies and casing so they can easily put a piece of gear out in the marketplace and see if people like it.”

There are already 500 Series racks that offer summing (Radial Workhorse) or switchable chaining/linking (Mercury G810). Some units overcome I/O pinout limitations on the back rail by adding TRS inputs on the front for link or inserts

(Tonelux TX5C). Also available are a digital delay line (Eventide DDL-500); a tape emulator (Rupert Neve Designs 542); mixers with 500 Series slots built-in (API The Box, Pete’s Place MK VIII, and SSL XL Desk, for examples); a modular mixer and output section built into a rack (Malcolm Toft Ocean Audio); and even a limited edition, original-design mic preamp from the custom-built console at Sunset Sound (S1P Tutti).

And what does the future hold for 500 Series pricing? These small, low-cost alternatives are still one thing: small. While there are still units in the “under \$500”

category, as innovation and features continue to expand so does the impact on one’s wallet. Some units are priced upward of \$1,000, like a \$2,200 preamp (Heritage Audio 1073), \$1,600 EQ (Bettermaker EQ502P) or \$2,500 compressor (Dramatic Audio Obsidian). How much will people pay for 500 Series modules? Only time will tell, I guess.

Looking ahead, I would echo the sentiments of Paul Wolff, who was there at the beginning. “It’s funny because it seems the format of the ‘70s has become the format of the new millennium.”

Sweetwater Is Your Pro Shop for 500 Series Processors

We have all the 500 Series modules you need to customize your studio's signal chain and get the exact sound you want. Plus, our expert staff is here to help you find the perfect modules for your particular needs. Sweetwater carries all the top brands you love — and we're here for you after the purchase. The right gear, when you need it — *that's the Sweetwater Difference.*



WE CARRY A FULL LINE OF 500 SERIES MODULES FROM TOP MANUFACTURERS:

API • A Designs • AEA • Aphex • BBE • Bettermaker • Burl Audio • Chameleon Labs • Chandler Limited • Crane Song • Daking • Drawmer • Earthworks • Electrodyne • elysia • Empirical Labs • Eventide • Focusrite • Grace Design • Great River • Heritage Audio • JDK Audio • Joemeek • Kush Audio • LaChapell Audio • Lindell Audio • Little Labs • Maag Audio • Millennia • Moog • Pete's Place • Purple Audio • Radial • Rupert Neve Designs • Shadow Hills Industries • Solid State Logic • TK Audio • Tonelux • True Systems • Valley People • Vintech • Warm Audio • and More

Sweetwater®

Music Instruments & Pro Audio

(800) 222-4700
Sweetwater.com

FREE 2-YEAR WARRANTY**
Total Confidence Coverage™ Warranty

FAST, FREE SHIPPING
On most orders, with no minimum purchase!

FREE PRO ADVICE
We're here to help! Call today!

0% INTEREST FOR 24 MONTHS*

On purchases of select manufacturers' products made with your Sweetwater Musician's All Access Platinum Card between now and January 31, 2015 – 24 equal monthly payments required.



*Offer applies only to single-receipt qualifying purchases. No interest will be charged on promo purchase and equal monthly payments are required equal to initial promo purchase amount divided equally by the number of months in promo period until promo is paid in full. The equal monthly payment will be rounded to the next highest whole dollar and may be higher than the minimum payment that would be required if the purchase was a non-promotional purchase. Regular account terms apply to non-promotional purchases. For new accounts: Purchase APR is 29.99%, Minimum Interest Charge is \$2. Existing cardholders should see their credit card agreement for their applicable terms. Subject to credit approval. **Please note: Apple products are excluded from this warranty, and other restrictions may apply. Please visit Sweetwater.com/warranty for complete details.

THE 500 LIST

AN EXTENSIVE HUNT FOR 500 SERIES COMPATIBLE MODULES RESULTED IN WELL OVER 100 SEPARATE INSTANCES.

MIC PRE

A-DESIGNS

P1, based on the Pacific mic pre; EM Silver, mic pre with steel output transformer and DI; EM Blue, mic pre featuring nickel output transformer; EM Red, mic pre with 50/50 output transformer. EM Gold, mic pre with steel output transformer.

adesignsaudio.com

AEA

RPQ500, based on the full-rack RPQ preamp.

ribbonmics.com

ALTERNATE SOUNDINGS

MP1, a +60 dB mic/line preamp; MP2, dual mic/line preamp; MD12, dual guitar and bass recording preamp.

alternatesoundings.fr

APHEX

A PRE 500, based on the Model 188 preamplifier with custom input transformer; J PRE 500, inspired by Aphex's flagship Model 1788A preamplifier featuring Jensen's JT11K8 transformer; DUAL RPA 500 Mic Pre, inspired by the popular Aphex Channel and 207D preamplifiers.

aphex.com

API

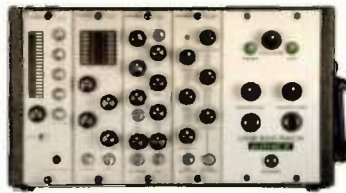
512C, fully discrete mic/line preamp

apiaudio.com

ATLAS PRO AUDIO

Juggernaut, Class-A, discrete, transformer-coupled preamp.

atlasproaudio.com



APHEX USB 500 Rack

Aphex's four-slot USB 500 Rack includes a Monitor section (with Mono and Dim controls), high output headphone amps (based on those in Aphex's HeadPod 4), MIDI I/O, and up to 96k operation. Its USB I/O makes it a unique chassis within the 500 Series marketplace.

Reviewed earlier this year by *PAR* Editor Strother Bullins, the USB 500 Rack "connects the freedoms of 500 Series modules with the practical nature of USB-based DAW productions."

AUDIO MAINTENANCE

Carnhill, mic pre with Carnhill input/output transformers.

audiomaintenance.com

AVEDIS

MA5, mic pre inspired by 1970s British Class-A consoles.

avedisaudio.com

BOZO ELECTRONICS

MFA3, mic pre with wide gain range.

boznel.com

BURL AUDIO

B1, mic pre to complement B2 Bomber ADC; B1D, as B1, but with all-iron BX4 output transformer.

burlaudio.com

BUZZ AUDIO

Elixir, low-noise, wide-bandwidth mic pre.

buzzaudio.com

CARTEC

PRE-Q5, pre with passive inductor EQ, identical to EQP-1A with extra gain stage and transformer.

wavedistribution.com

CHAMELEON LABS

Model 581, vintage-style, discrete, Class-AB; 7681, discrete Class-AB circuit, neutral mic pre.

chameleonlabs.com

CLASSIC AUDIO PRODUCTS OF ILLINOIS

Classic API Heider FD312, the only Classic API model not available in kit form, distributed exclusively by Nashville's Rack-N-Roll Audio.

classicapi.com

DAKING

Mic Pre 500, derived from the company's Mic-Pre One.

transaudiogroup.com

DAV

Broadhurst Gardens 501, neutral mic pre with DI.

davelectronics.com

EARTHWORKS

500 Series Preamp, identical to the Earthworks 1021, featuring ZDT (Zero Distortion Technology) with switchable phantom power, polarity invert, peak amplitude clip detection, and transformerless output stage.

earthworksaudio.com

EISEN AUDIO

DIY500, framework to build own mic pre; EAC500, tailored mic pre based on DIY500 template; EAC312V, authentic 312 mic pre.

eisenaudio.com

ELECTRODYNE

501, discrete, 2-stage studio preamp with active DI.

petersplaceaudio.com



JDK AUDIO V10 PRE and V12 COMPRESSOR

The V10 (pictured) is a single channel pre with 54 dB of mic-level gain, 45 dB of instrument-level gain, padding, phantom power, and phase inversion. The JDK V12 compressor offers a patented THRUST circuit that "preserves high-frequency content" and offers threshold, ratio, knee, and gain makeup controls. The V10's circuit is identical to a single channel of the JDK R20 mic preamp, and the V12's circuit is identical to a single channel of the JDK R22 compressor (itself a replica of the famed inline compressor on AT1 Paragon consoles).

The largest 500 Series selection anywhere.



NEVE 1073LB

The quintessential mic pre repackaged for your 500 Series rack

RUPERT NEVE DESIGNS 551 INDUCTOR EQ

3 bands of EQ inspired by Mr. Neve's most prized vintage designs

SMART RESEARCH C1LA

Industry-standard 2-channel classic VCA British console compressor



API 512C

The distinct API sound at an extremely affordable price

ELECTRODYNE 511

Broad and sweetly musical inductor EQ



VINTAGE KING RACK 500

Vintage King's new, very own 500 Series rack!

FIVE FISH STUDIOS

SC-501 mic preamp, "Clean, fast and clear;" X12 mic preamp, "1970s-style aggressive" sound; X72 mic preamp, "Big, punchy and huge;" MX5 "hybrid" preamp, a X12 and X72 quality blend.

fivefishstudios.com

FOCUSRITE

Red 1, English-built original design with Lundahl LL1538 input transformer and custom Carnhill output transformer plus phantom power, polarity invert, illuminated VU, stepped Grayhill gold-plated military gain switch and up to 60 dB of gain.

focusrite.com

FORSSELL TECHNOLOGIES

SMP-500, sonically neutral mic pre, based on SMP-2.

forsselltech.com

FREDENSTEIN

F600, pre with Lundahl input transformer, Mu-metal shield and core, electrostatic shield and high bandwidth coils.

fredenstein.com

GRACE DESIGN

m501, transformerless mic pre based on m101.

gracedesign.com

GREAT RIVER

MP500NV, Mic pre inspired by early '70s consoles.

greweb.com

INWARD CONNECTIONS

Magnum mic pre, Classic sound; Nitro Equalizer, two-band, fully parametric.

inwardconnections.com

JDK AUDIO

V10, Single channel, identical to JDK's R20 with 54 dB of gain with pad, phantom power, phase reverse.

jdkaudio.com

JLM AUDIO

Dual99v500, mic pre using two discrete 99 V op-amps; TG500, a 2-FET, 6-transistor, Class-A design mic pre; NV500, reworked take on Neve 1073/1290 mic pre.

jlmaudio.com

KUSH AUDIO

Electra, single channel 4-band EQ, HPF, Low Shelf/Fader mode switchable, Class A.

wavedistribution.com



FOCUSRITE RED 1 MIC PRE

In his full *PAR* review, Contributor Randy Poole notes, "Focusrite has successfully squeezed its amazing ISA preamp into 500 Series parameters, all done with the largest output tranny I've ever seen in such a module. Based on my own experience, the Red 1 500 seems to be faithful to the original in every way."

SONIC FARM SILKWORM PREAMP

In his full *PAR* review, Senior Contributor Russ Long comments, "The Silkworm incorporates a Cinemag input transformer and provides a maximum gain of 66 dB (or 42 dB of instrument gain) with a fully discrete gain stage and a full DC path with no coupling capacitors. The maximum output level is 28.7 dBu. The output is switchable between solid-state balanced and transformer (Cinemag 100% Fe). While the Silkworm is not a clone of any other mic pre, I'm still prone to describe it as very GML-esque in the solid-state output mode and very Neve-ish in the transformer output mode."



LACHAPPELL AUDIO

Model 583E, a true vacuum-tube amplifier preamp/EQ; 583s, vacuum-tube mic pre based on 992EG platform.

lachapellaudio.com

MPA, fully discrete, dual-stage mic and DI preamp.

lazpro.com

LIPINSKI SOUND

L-609, simplified version of Signature series mic pre.

lipinskisound.com

MÄAG AUDIO

PreQ4 one channel pre with "Air Band" shelf boost, 2.5 kHz to 40 kHz corner.

maagaudio.com

MATRIX AUDIO SYSTEMS

HO-5, single-channel version of HO-3.

matrixaudiosystems.com

MILLENNIA MEDIA

HV-35 preamp, Millennia clarity hits a 500 module.

mil-media.com

NEVE

1073LBEO, in the image of the Neve 1073 Classic module; 88RLB, mono pre from the Neve flagship 88RS console.

ams-neve.com

OLD SCHOOL AUDIO

MP1—a Low-noise, high-gain mic pre; MP1, C-vintage-style preamp; -L, pre based on Lundahl 1538XL input transformer.

oldschoolaudio.com

PHOENIX AUDIO

DRS-1R pre/DI, Class A, built by pre-1980s Neve experts.

phoenixaudio.net

PRODIGY ENGINEERING

Bella, remote-control mic pre.

prodigy-eng.com

PURPLE AUDIO

Biz Mk, pre with mic/line switch and DI load switch; Pants, 4 op-amp differential mic pre.

purpleaudio.com

RADIAL ENGINEERING

PowerPre, pre with 3-position voice control; PreComp, preamp and compressor channel strip; PreMax, preamp and three-band EQ channel strip.

radialeng.com

RASCAL AUDIO

Two-V Dual Mic Pre, 2-ch. solid state "double-wide" module featuring custom-designed transformers with Gain, Input, Output knobs and Phantom, Impedance, Polarity and HPF switches.

rascalaudio.net

REALIOS

A9031, pre with '60s/'70s Olympic Studios sound; A9033, pre with passive voltage gain.

realios.com

ROLL MUSIC

RMS 5A7 "Tubule," transformer-coupled tube mic pre.

rollmusic.com

RUPERT NEVE DESIGNS

Portico 517, based on the 5017 Mobile Pre. 511 With Silk, a HF harmonic content parameter.

rupertneve.com

SHADOW HILLS INDUSTRIES

Mono Gama, mic pre with Jensen input transformer.

shinreudio.com

SHINYBOX

Si, transformerless pre, switchable input loading.

shinybox.com

My Magnificent Seven by Russ Long

Having accumulated nearly two dozen 500 Series modules over the past few years I have to confess that I've become addicted. Selecting the seven that I truly can't live without was quite a task, but I believe that the cream of the crop has risen to the top. Here they are (in no particular order):

1. **Sonic Farm Silkworm:** Built by a couple of genius mad scientists in Vancouver, BC this beast works wonders on drums, bass, guitars and vocals.
2. **Rascal Audio Two-V:** This work of wonder is the most flexible drum preamp I've ever heard.
3. **Empirical Labs Doc-Derr:** A killer EQ and compressor built into a single module. I love it on bass guitar and snare.
4. **Alta Moda Hippo:** Reminiscent of the SSL compressor, but actually better. I use it on drum overheads while tracking, piano during overdubs and on the stereo bus while mixing. It rocks.
5. **Moog Analog Delay:** The best sounding delay ever. It includes a plug-in that stores the settings with your DAW session and it recalls via MIDI. All of the convenience of mixing ITB but it's the real deal, not a virtual model.
6. **Ingram Engineering MFA575 Microphone Processor:** It's the only 500 Series module that incorporates a mic pre, eq and compressor into a single unit and all three sound great.
7. **LaChapell 583s:** An amazing tube pre that beautifully records piano, acoustic guitar and vocals.

SHADOW HILLS INDUSTRIES

Optograph 500, single-channel, discrete, optical compressor.

lmraudio.com

SOLID STATE LOGIC

E-Series Dynamics Module, compressor/limiter and expander/gate, circuitry and components from the original SL 611 E Series channel strip from the SSL SL 4000 E, Stereo Bus Compressor, from the 1980s-era G Series console's centre section.

solid-state-logic.com

STANDARD AUDIO

Level-Or, JFET limiter/distortion processor.

standard-audio.com



BBE SM500 SONIC MAXIMIZER

The single-channel SM500 features BBE's legendary sound sculpting processor adjusts phase relationships and augments high and low frequencies "to brighten, clarify and add fullness." Features include the same processing engine as the BBE 882i rack-mount model.



EVENTIDE DDL-500 DIGITAL DELAY LINE

The DDL-500 features 10 seconds of delay at a 192 kHz sample rate and a unique design that strictly limits the amount of digital circuitry to the bare minimum. Soft saturation clipping, low pass filter, feedback, insert loop, relay bypass, and +20 dB boost are all analog.

OTHER

ALTERNATE SOUNDINGS

M2B, 8-channel summing module with main insertion; M26, 26 x 2 summing module, including insertion paths.

alternatesoundings.fr

APHEX

EX•BB 500, a mono module featuring the popular Aphex Aural Exciter and Optical Big Bottom processors.

aphex.com

API

505-DI, an instrument preamplifier specifically designed to accept a guitar, bass or keyboard direct input while minimizing any loading effect on Hi-Z instrument pickups.

apiaudio.com

BBE

SM500 Sonic Maximizer, BBE's legendary sound sculpting processor in 500 Series form.

bbsound.com

EMPIRICAL LABS

DerrEsser, multi-function filtering device.

empiricalaudio.com

[continued on page 50]

DISCLAIMER

We don't claim to have included every 500 Series module introduced in the marketplace to date, and new 500 Series modules are announced at a now-steady basis. Stay tuned to the pages of *Pro Audio Review* for continued product announcements and reviews within this burgeoning hardware category.

Natural Selection.



Mic Pres

512c • 505 direct input

Equalizers

550A 3 Band • 550b 4 Band
560 10 Band • 565 Filter

Compressors

527 • 525

Racks

5006b-HC 6 Slot lunchbox®
500-8Pack 8 Slot lunchbox
500VPR 10 Slot Rackmount

The Original 500 Series from API

The natural selection for analog warmth

www.APiaudio.com



by Rob Tavaglione

PAR Regular Contributor

rtavaglione@nbmedia.com

API The Box Analog Recording and Mixing Console, Manley Core Channel Strip and Pearl Priority Condenser Microphone

Everybody's been saying, "business is up," and optimism abounds as we approach a new year and new opportunities. The market is good, but there are hungry competitors seeking to grab your business and their stuff sounds great, too. If you're looking to command your clients' attention, here are three investments that are sure to impress while attaining a tone that is anything but typical.

API The Box Analog Recording and Mixing Console



The Box's center section is fully featured: two VUs, built-in talkback mic, four stereo 2-track inputs and cue masters plus all the typical control room features.

Many of us are quite happy with the digital mixers included as part of our DAWs, but some stubborn holdouts still insist on the tone, texture and soundstage of an analog mixing board. It's a nice option to have, no doubt. Yet the size, maintenance and redundancy of all those controls also found in a DAW are enough to ward off many potential desk owners. API's solution to this dilemma is The Box, a compact analog console that sticks to the heart of the matter: analog recording and mixing without frills or frailty.

Features

Think of The Box as a classic API mixer without any of the features that can be most effectively handled in your DAW. It starts with four input channels housing four API mic pres (API 3324), two channels of four band EQ (API 550A), two open

500 Series slots and all the routing/patch-point options users will most often desire. These four channels are also routable to the L/R mix, just like the 16 channels of DAW-returned analog summing. Other features include full-size faders, pan controls, mutes, solos and a fader defeat switch [making 16 channels of summing at precise unity gain very easy]. These channels (along with the first four) also provide cue sends, one stereo/two mono that allow pre/post routing; panning; and talent cue mixes or aux sends (the first four channels act as two stereo returns).

The center section is fully featured with two VUs, a built-in talkback mic and array of controls, four stereo 2-track inputs (with additive monitoring at unity gain), cue masters and all the typical control room features (main/alt monitors, dimming, mono sum). This section also houses two channels of API 527 compression, routable to the input channels or the L/R mix bus. Like the mic pres, these comps are the real deal with API's Thrust circuit (sidechain HPF), old or new topologies (either feed-back or feed-forward) ratio, attack and release. The only thing missing is make-up gain.

The back panel squeezes a lot of connections into a small space with two DB25s for DAW returns, insert points (quarter-inch TRS sends and returns), mic/line inputs, cue sends (via DB25), monitor outputs (via XLR) and numerous I/O for those four input channels. There's a headphone output on both back and front.

Let's also point out what's not here, as that helps indicate The Box's purpose: there's no EQ (other than the two 550s), no effects returns, no subgroups, no surround mixing and—perhaps most importantly—no DAW controls, no video monitor or touchscreen, no data faders, and no MIDI. As such, The Box is a mixer designed for very specific applications.

In Use

Let's not waste valuable time debating the merits of API's audio quality; API tone—derived largely from their proprietary op amps—is widely respected, favored and known as punchy, clean, clear and dynamic. It's admired by engineers of all types and coveted by those working on rock 'n' roll.

API's "In The Box" Contest Winner

In a joint effort between PAR-Tube—*Pro Audio Review's* online video initiative—and API, our readers were asked to submit music for re-mixing in The Box, getting a chance to blind-compare their in-the-DAW mix with The Box's re-mix and win an API 500 Series module for their efforts.

We received great sounding submissions covering rock, power-pop, jazz and EDM, but Ricardo Fernandes (of Dynamix Studio in Lisbon, Portugal) and his hard-rocking production of Sabino's "Not the End" was picked as our winner (due to its clarity, balance, punch and stereo imaging). Fernandes submitted eight stereo stems that, when summed at unity gain, recreated an ITB DAW mix. I created two mixes (one ITB DAW, one via The Box), volume matched them and sent them to Ricardo for inspection.

I narrowly preferred the mix from The Box due to its depth of soundstage, satisfying low-mids, "completed and sculpted" bottom end and overall "largeness" of the imaging, even if the DAW mix seemed to have even more side-to-side separation and a little more tightness to its punch.

Ricardo (also the guitarist on the track) picked the API mix too. Here's his reasoning: "The differences are mostly with the body and fullness of the micrange so typical with the API sound. You can really tell the differences in the punch of the snare, fullness of the bass and beefiness of the distorted guitars. There is something about API with distorted guitars that I love. I also felt that the front-to-back resolution was better and there was more separation between all the elements."

Visit the [PAR SoundCloud](https://soundcloud.com/pro-audio-review-magazine) to listen to the examples yourself...
<https://soundcloud.com/pro-audio-review-magazine>

Thanks to everyone who submitted MP3s for consideration, as the general quality of the group was quite impressive. Stay tuned to PAR-Tube for more interactive, reader-involved, manufacturer-supported efforts in audio comparison and evaluations.

To my ears, the mic amps, 500 Series EQs, 527 compressor, and summing comprehensively sound "Classic API," uncompromised and as expected.

I've recently moved from a customized Soundcraft Ghost mixer to an analog summing device. Putting The Box in my signal path brought me the best sonics and mixes I've experienced yet. My rock, country and pop clients all loved The Box sound and readily approved their mixes. The only clients who didn't choose The Box for their mixes were the metal guys; they generally preferred the stark soundstage and faster punch of digital, ITB DAW mixes.

I also had a number of tracking dates

using The Box to great success. The mic pres and the 527 compressor did wonderful things on kick, snare and overheads; the drummers all but drooled. The cue sends allowed me just what I needed: two mixes with one for the drummer with lots of click, all switched to pre-fader, with ample output from the headphone amp to drive the drummer's cans. I've used many big classic analog consoles for tracking (Harrison, Neve, etc.) and I lacked nary a thing with The Box.

Summary

I have no criticisms of build quality, design or implementation of The Box. The Box can't be everything for everybody, though; it fills a

niche as a DAW's best all-analog companion. If you need a mixer with more preamps, EQs and sends, API has the 1608. Maybe you expect DAW control and digital features (converters, clocking, digital I/O) in your mixer. If so, there are numerous options to satisfy that niche, too.

If you're looking for the depth and soundstage of analog mixing, the prestige and smooth ride of a real console and the sonics of classic API mic amps and processors, consider The Box. A price of

\$18,000 may seem like a lot at first—API does offer interest free, 36-month financing of about \$500 a month— but if you look at the cost of a premium 16-channel analog summing device, dual 500 Series EQs, dual API 527 compressors, four 3324 mic preamps and a extra few peripherals, The Box starts to look like a very good value for discriminating audio engineers preferring analog flavor.

Contact: API | apiaudio.com

Manley Core Channel Strip

The iconic Manley VoxBox uniquely places an ELOP compressor prior to its tube-based mic preamp then follows it with Pultec-style EQ and a limiter/de-esser for a warm, classy sound and identifiable output.

At \$2,000, the Manley Core is about half the price of the venerable VoxBox, yet quite similar. With this in mind, I conjecture that the Core is "VoxBox Lite" as it also places ELOP before tube pre, but follows it with a three-band Baxandall EQ, all again contained by an output limiter. It's essentially "half-price Manley gear"—a rare yet beautiful phrase for the ears.

Features

The Core starts with the VoxBox's electro-optical compressor with fixed 3:1 ratio, threshold (the min/max control), attack, release parameters and bypass. This simple layout and the inherent gentleness/musicality of Manley's ELOP (and surrounding circuitry) promises an easy-to-use dynamics controller that novices will surely appreciate. Manley's marketing is aiming this product squarely at the project studio.

The tamed output of the Core's compressor feeds its tube mic amp (same as the VoxBox pre-amp) with 300 VDC rails; it also accepts line level signals, has a 120 Hz high pass filter, polarity flip, phantom power and two gain ranges (with the high-range reaching +60 dB max). The discrete,

solid-state quarter-inch DI input is taken from Manley's SLAM! with a 10 Mohm impedance that sounds super-high, but as such presents no "loading" or high-frequency loss to passive instrument pickups.

Next, the Core's signal hits its three-band EQ section with



David Clark Pro Audio Headsets. The first choice of front-of-house professionals.

David Clark Pro Audio Headsets provide clear, crisp sound and outstanding comfort for front-of-house professionals, sound and lighting engineers, video and camera personnel and event production crews. Now with non-reflective, all-black matte hardware to minimize glare. Find your sound solution by calling **800-298-6235** or visit our website.

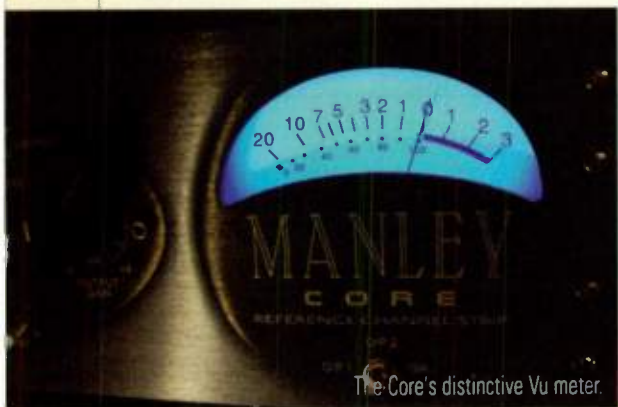


Made In USA



© 2014 David Clark Company Incorporated
® Green and red domes are a David Clark registered trademark.

WWW.DAVIDCLARK.COM



The Core's distinctive Vu meter.

sweepable mid-bell curve (from 100 Hz to 1 kHz, or 1 kHz to 10 kHz, +/- 10 dB maximum) and two Baxandall high and low shelving filters (80 Hz and 12k, +/- 12 dB max). Baxandall filters are the “classic” high and low shelves—a very simple and musical design found in countless consumer stereos, musical instruments, amps and pro audio gear as well.

The Core’s master output level control is preceded by a FET brickwall limiter with continuously variable threshold and release (whereas the VoxBox offers a switchable 10:1 output limiter or de-esser at the output stage). The back panel houses a quarter-inch TRS insert point and a post-compressor/mic-pre “direct” output for those who like patching/routing options.

In Use

First of all, the Core is pure Manley Labs. Keeping the price down did not create a skimpy, flimsy unit. The Core drives like a VoxBox and feels like one, too. (I love those knobs.) Sonically, the two sound quite similar, especially on vocals. There’s a certain creaminess, smoothness and sculpting to the tone that is unique: a certain “finished” quality that sometimes sounds exaggerated in the studio, but just simply sounds right once your mix is out in the world. If you want Manley vocal tracks, the Core will satisfy although you may wish for that nifty de-esser on sibilant singers (or make-up gain on the compressor for easier comparisons).

I also received contented smiles on bass guitar, where The Core makes life easy. Just plug into the front panel, dial in some ELOP squeeze (plenty gentle and hard to go wrong), add a little Baxan-bottom-bump, sweep the mid band—finding the trouble and pulling it out, contain the remaining



peaks with your limiter, and then print hot.

I tried all kinds of sources with The Core. The sum of the results was a lot like big brother VoxBox’s results. It offers a lot of versatility, but there’s a certain smooth-silky quality that is not removable; it’s the combination of tubes, proprietary transformers, lots of discrete circuitry and very particular design elements contributing to the personality. It’s a warm, glowing personality that cannot be repressed, like meeting a striking person that leaves a lasting impression. Overall, the Core excels at musicality, warmth and politeness—no aggression, grit or invisible linearity.

Please listen to my audio clips gleaned while reviewing The Core: <https://soundcloud.com/pro-audio-review-magazine>.

Summary

To my ears, the biggest difference between the VoxBox and the Core is in its EQ sections

with significant operational and tonal differences. Even if the Core doesn’t capture that Pultec-ish passive euphonic “smile” (top and bottom peak only, mid dip only), these Baxandall filters are actually more flexible (boost or cut), though lacking mid-band Q control. The bottom shelf is plump, the top shelf is quite smooth and pretty and the midband is wide enough for gentle strokes. There’s ample control here for all but problematic sources, although I did miss being able to take the EQ section in or out with a switch.

The Core’s simple layout, minimal options and foolproof processing makes for one user-friendly, great-sounding and affordable unit. That much utility sounds ideal for project studios, but at this price, many a pro will gladly add another Manley channel to their kit. Wise move by Manley Labs, I’d say.

Contact: Manley Labs | manley.com

Pearl Priority Condenser Microphone

At first glance, you might miss the uniqueness of Pearl’s Priority microphone, as the simple cylindrical body harbors no switches, buttons or controls. Look a little closer and you’ll find a rect-

angular diaphragm in the head basket. And yes, a rectangular surface reacts to sound waves differently from typical disc-shaped designs.

Features

The Priority is pretty simple overall, with features including an attractive steel head basket housing Pearl’s model 2900 39 mm x 15 mm large diaphragm “membrane” (as Pearl calls it) capsule with a single green LED indicating that 48 VDC phantom is supplied. Impedance is a low 100 ohms, self-noise a low 14 dB, while frequency



Tavaglione: "If the only rectangular transducer in your kit is a ribbon, then you owe it to yourself to try the Priority."

response is 20 Hz to 20 kHz.

Apparently, Pearl has a new production method to make this membrane much easier to manufacture, helping keep the price down to about \$1,000 street. The Priority comes with a standard mic clip and is stored in a leather pouch, shipped in a whiskey-style cardboard tube.

In Use

I have heard that rectangular membranes tend towards linear response and realism, much like Pearl's CC22 cardioid mic (their most popular model, even though they have numerous stereo and long membrane models). The Priority possesses that characteristic flatness/neutrality, but with a 3 dB presence rise centered around 5 kHz.

As I mounted the Priority onto a tripod boom for some vocal tracking I found its most unfortunate shortcoming: its small mic clip holds the Priority's shaft, but the shaft is extremely short, allowing way too much play and not nearly enough grip. It gets worse, too; the mic's XLR connector

is oriented so that the cable's XLR connector release tab faces the rear of the mic clip where the tab is depressed to release the mic (see attached photo example). Admittedly, it's a terrible design that complicates positioning and is accident prone.

Upon hearing my first vocalist subject via Priority, it became apparent that Pearl isn't kidding about realism. The presence rise didn't seem all that pronounced to me, the tone was basically flat and the dynamics were distinct and real—yet the overall presentation was a little too "reference" for this particular rocking track.

Soon, I found myself curiously applying the Priority to any source I could. Acoustic guitar was a nice fit, with a stark realism, no harshness at all up top, enough presence rise for clarity and cut, very honest and revealing mids and a balance that was notably more classic than modern. On percussion, a lack of personality or typical condenser sizzle allowed tracks to sit in the mix as if a bright ribbon was used (with less chubbiness down low than a ribbon). For that matter, instruments of all kinds exhibited the same consistent response from the Priority.

I even got good results on drum room (about six feet out from kit, nearly waist high, angled slightly downward) assuming we all appreciate an unassuming, neutral voicing with good balance from bottom to top. Placement considerations became very apparent with drums; even though the Priority is cardioid from side-to-side,

the response on the vertical axis has nulls with different pattern and frequency sensitivities than the sides. As such, users must watch the mic's tilt and swivel. This characteristic also lends some unique and interesting placement options and variables.

Listen to the Priority's review webclips here: <https://soundcloud.com/pro-audio-review-magazine>.

Summary

If the only rectangular transducer in your kit is a ribbon (albeit a corrugated rectangle), then you owe it to yourself to try the Priority. For that matter, Audio-Technica also has their AT5040 (a condenser with four rectangular diaphragms reportedly sharing many of the Priority's aural characteristics) and Pearl has numerous similar models with plenty of options. The sonic differences between rectangular and circular diaphragms are indeed audible, significant and offer utility to those who have mic placement down to a science.

Apparently Pearl will soon offer a better shock mount (sold separately) and it is a must-have if one intends to use this mic. The mic is only \$799 street, so I'd recommend factoring in the new shock mount and just plan to buy the set; you'll likely find that the sonic uniqueness and unusual performance of the Priority fits nicely into the versatile and varied mic collection of the curious audio pro.

Contact: Pearl Microphones | [pearlmicrophones](http://pearlmicrophones.com)

Pearl Priority: Rob Says "Try This"

When miking singer/songwriters who prefer to cut acoustic guitar and vocals simultaneously, isolation between guitar and voice can be quite hard to achieve. Try the Priority for the vocal mic, placed upside down from above, on-axis with the singer's mouth, and with the Priority's mic-top null pointed downwards at the guitar.

Have you ever tried a Blumein pair on a singer/songwriter—with one figure-eight pattern aimed towards guitar and the other aimed 90 degrees away towards the vocalist's mouth? It works well and is nicely phase coherent, but sometimes you need even more vocal. A solution may be placing the Priority upside-down (as above) right in the null between the two figure-eights, aimed on axis with the singer. It gathers a nice vocal with a little guitar that, when added to the Blumein pair, fills in the middle with a commanding presence.

new live products

Mackie DL32R 32-Channel Wireless Live Sound Mixer with iPad Control



Mackie has announced its latest mixer—the DL32R 32-Channel Wireless Live Sound Mixer

with iPad Control (\$2499.99 list)—building on the technology and workflow established in its wildly successful DL1608.

The official word from Mackie: “The DL32R delivers 32-channels of powerful digital mixing that’s completely controlled wirelessly from your iPad ... its direct-to-drive multi-track recording/playback and an ultra-compact 3U rackmount design that lets you ditch the snake once and for all. Fully loaded with DSP on each of the 32 Onyx+ mic pres and 28 busses, the DL32R provides the power needed for professional applications. The industry-proven Master Fader control app delivers extremely intuitive control over everything, including the ability to digitally recall each and every setting for incredibly fast setup.”

“Digital mixing has evolved,” explains Mackie Product Manager Olswang. “When digital mixers began to hit the market, manufacturers were focused on delivering a work surface, controls, a feel and a look that were most like traditional analog mixers. About four years ago, we started to realize that this had become restrictive, and we could deliver some huge benefits to the user by readdressing this approach. That’s where we started with the DL1608: to deliver benefits that can only be accessed when rethinking digital mixing from the ground up.”

According to Olswang, over two million shows have been mixed on the DL1608 to date, and much of the DL32R’s expanded features came about via requests and the expressed needs of the original DL’s enthusiastic, vocal user base. “We learned from DL1608 users that wireless mixing is its most important feature, and the users wanted more than that. We set out with the DL32R to deliver all the benefits of wireless control that we could while looking at a few things holding us back with the DL1608.”

The DL32R now features remote control mic preamps as well as multichannel recording and playback. Taking it a step further, Mackie separated playback from recording in the DL32R.

Another key point of the DL32R is its AoIP (Audio Over Internet Protocol) capabilities via Dante compatibility. “As a company that delivers solutions from mixers to speakers, we feel we’re incredibly well positioned to create Dante-enabled solutions,” notes Olswang. “We’re just starting to see the price point of Dante networking come down to where Mackie tends to be, and this opens up some incredible possibilities.”

Mackie: mackie.com/DL32R

Yamaha Rivage PM10 Live Mixing Desk



Yamaha has announced its new flagship live mixing desk, the Rivage PM10 Digital Mixing Console, part of the company’s PM Series of Digital Live Sound Consoles. Evolving from Yamaha’s PM1D and PM5D, the new Rivage PM10 system is comprised of the CS-R10 control surface, DSP-R10 DSP engine, RPi622 I/O rack, three types of RY cards, and two types of HY cards, allowing users to configure and match the scale and functional requirements of any application.

Console operation centers around Yamaha’s traditional Selected Channel section paradigm, allowing all parameters of the selected channel to be directly controlled. There are also two large LCD touch screens

that provide logical continuity with the faders, offering the same operability as the Centralogic interface in 12-channel groups. In addition to this dual-interface hybrid operation style, horseshoe-ring encoder position indicators, refined panel layout and several other aspects aim to improve operability.

Yamaha Commercial Audio: yamahaca.com

Alto Pro Black Series Powered Loudspeakers & Electro-Voice ETX Powered Loudspeakers



by Strother
Bullins

Editor of PAR
sbullins@nbmedia.
com

Alto Pro Black Series Powered Loudspeakers

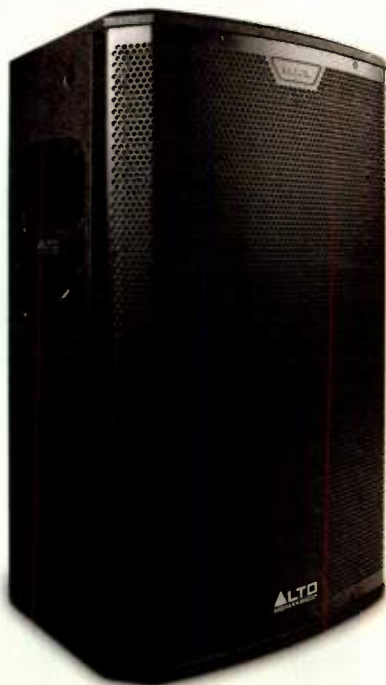
Part of InMusic Brands—parent company to Alesis, Akai and M-Audio—Alto Professional has evolved into a recognized portable PA brand, thanks to overall affordable prices and burgeoning sales. I've personally discovered notably high overall quality and innovative ideas in the brand, too. From the clever TEC Award-nominated Stealth wireless system for active loudspeakers (www.prosoundnetwork.com/altostealth) to what's reviewed here—the flagship Black Series Powered Loudspeakers—today there are more and more Alto Pro logos to be seen at live music venues, houses-of-worship and rehearsal spaces of all types and sizes.

Having previously reviewed Alto Pro's Truesonic Series of powered portable PA—prosoundnetwork.com/AltoProTrueSonicTS115A—I wasn't expecting such a "tour-grade" build quality in the Black Series. Sure, the Truesonic speakers are impressive performers and well-built, but with a "low-cost" qualifier; they feature lightweight polypropylene cabinets, albeit well-made, scratch resistant, and good-sounding.

Reviewed here, the Black 12 two-way full-range pair (\$599 street, each) and accompanying Black 15 SUB subwoofer (\$1,099 street) are really not lightweight—built of 18 mm plywood and adorned with various beefy custom-molded handles, stand and pole mounts and rigging points with a steel speaker grille—and are comparatively great-sounding. Each Black Series component features an advertised 2,400 W of

Class D juice, albeit "peak" power; a more comparable spec would be its 1,200 W continuous power.

All Black Series components are ready to work with Alto Pro's Live Drive wireless speaker app for iOS, allowing for level-matching, EQ adjustment, compression, time-alignment, and more. Also included per component is an extended-range (up to 100 ft) Bluetooth antenna for wireless device pairing. While I personally had little use for the Bluetooth features, I can see many



Pictured, Alto Pro's Black 12.

applications where it would come in handy, perhaps even moreso in the near future.

The Black 12 provides a 12-inch LF transducer and 1.75-inch HF driver; the Black 15 SUB provides a 15-inch long-excursion LF driver. The Black 12's built-in two channel mixer offers mic/line amplification on #1 and line only on #2 via XLR/TRS combo connectors; XLR mix out with mix pre/post volume switch; and five DSP modes, switchable via toggle button—Flat, Contour (boosted bass and treble), 80 Hz HPF, Ext LF (extended LF response), and Custom (customizable via Line Drive). The Black 15 SUB provides dual XLR/TRS combo inputs and subsequent XLR outputs; polarity reverse; crossover bypass switch; and five DSP modes, also switchable via toggle—LPFs at 80, 100, 120 and 140 Hz and Custom (via Line Drive, too).

I had the pleasure of using the Black Series rig at several various gigs—an outdoor wedding (under an events tent), two medium-sized club gigs, and a loud music playback/DJ job. For each, the Black Series flaunted its flexibility. Paired with my iPhone, Alto's Live Drive app opened up a world of detailed flexibility normally unattainable in most portable PA boxes, and even without the feature, the DSP presets provided sufficient EQ-based parameters to choose from.

Readily apparent was the smooth HF response of the Black 12 tops; it reminded me more of a refined studio monitor than a portable PA speaker. Band members commented that it sounded "classic," "full," and "not hyped." I can't help but think the over-built, thick-walled cabinetry of the Black Series contributes greatly to these sonic

characteristics.

If there's any negative to the Black Series, I've alluded to it above. Compared directly to competing products, these cabinets are heavy, even with lightweight Class D amps (the Black 12 is 51 lbs and the Black 15 SUB is 83.4 lbs). I've love some casters on the subwoofer, as it's not the easiest cabinet

to carry; it's front-heavy and awkward at first to move, even with two people. That said, the weight isn't a deal-breaker and, if purchasing for a relatively fixed install—clubs, HOW, and various other venue applications—it really wouldn't matter at all.

Most importantly, the Black Series, in my experience, stands up performance-

wise next to competition costing literally hundreds of dollars more per component, pushing Alto Pro up to compete against some of the most recognizable brands in live sound reinforcement. For my money, that alone makes the Black Series a plunge worth taking.

Contact: Alto Pro | altoproaudio.com

Electro-Voice ETX Powered Loudspeakers

My favorite "workhorse" portable PA line of the last few years would have to be the ZLX Series by Electro-Voice. At \$349 street, the ZLX-12P powered two-way speaker is a true bargain that works incredibly well as a main, monitor or auxiliary speaker; especially handy is its two-channel built-in mixer and eighth-inch input for playback, making it ideal for singer/songwriter jobs and beyond.

The ETX is a marked step up from the ZLX in build, component and cabinetry materials, DSP functionality and more. Enclosures are relatively compact and made of 18 mm, 13-ply birch plywood with eight mounting points, custom die-case aluminum pole cups, handles and hardware, all finished in EVCoat texturized paint. It borrows many traits from E-V's touring speakers and are built in the USA. Features include a variety of proprietary E-V technologies including FIR-Drive (Finite Impulse Response) filters and the Signal Synchronized Transducer (SST) waveguide design. A single-knob DSP control via a relatively large LCD screen provides EQ, limiter, input level controls/metering and master volume adjustments. The ETX line offers 1.25-inch titanium compression HF drivers and power is provided via Class D amplification at 1,000 W and 900 W (continuous) for full-range and subwoofer enclosures, respectively. The entire ETX line is well matched maximum SPL-wise, with all specs falling between 134-136 dB peak.

The ETX rig that Electro-Voice delivered for review included two ETX-10P full-range and one ETX-15SP subwoofer enclosures. Like the Black Series reviewed above, these solid cabinets are weighty, too; the ETX-10P is 44.8 lbs and the handily castered

ETX-15SP is 91.9 lbs. A nice touch are E-V's canvas speaker bags for ETX, which slide over the top of each cabinet to keep them looking like new, complete with side pocket for storing XLR and IEC power cables, etc. Full range enclosure I/O includes two XLR/TRS combo jacks and one XLR link output.

This is one powerful, efficient, sonically sculpted portable PA rig with very useful DSP parameters. Build quality is top-notch and the cabinets are obviously serviceable, allowing years of pro-grade use and maintenance, if necessary.

Besides using the ETX-10P pair in a variety of simple "speaker on a stick" applications and as some very powerful, great sounding stage monitors, I employed the full three-piece ETX rig in an old local theater for a classic R&B performance—three harmonizing vocalists and

rhythm section. Here, ETX's well-conceived EQ presets were very useful in compensating for the venue's lack of acoustic treatment (it was basically a large wooden box). After an hour of setup and listening, the band members and I agreed that the ETX could be the most user-friendly, great-sounding PA we'd ever used together—and that's covering a lot of products and locations. The ETX rig was especially impressive in vocal/midrange intelligibility—smooth with pinpoint-accurate details, all clean as a whistle.

ETX Series performance doesn't come cheap, however. The smallest ETX, the ETX-10P, is \$1,099 street, each; the ETX-15SP is \$1,399. Naturally, a \$3,500 portable PA isn't for everyone. But if you're a working musician, engineer or local/regional sound provider looking to make a value-holding investment in today's most innovative portable PA system that can deliver professional results, the ETX should be a top consideration.



The American designed/
built ETX Series from E-V
is modern, refined PPA.

- 38 API Audio
apiaudio.com

- 52 B&H Pro Audio
bhproaudio.com

- 29 Dave Hill Designs/Crane Song
davehilldesigns.com

- 41 David Clark Company
davidclark.com

- 3 DPA Microphones
dpamicrophones.com

- 2 Eventide
eventide.com

- 8 Full Compass
fullcompass.com

- 10 IsoAcoustics Inc.
isoacoustics.com

- 9 Lectrosonics
lectrosonics.com

- 25 Maag Audio
maagaudio.com

- 27 Millennia Music & Media Systems
mil-media.com

- 24 Radial Engineering
radialeng.com

- 7 Rohde & Schwarz
rohde-schwarz.com

- 5 Shure Inc.
shure.com

- 13 Sunburst Gear
sunburstgear.com

- 31 Sweetwater Sound
sweetwater.com

- 33 Vintage King
vintageking.com

EQUIPMENT FOR SALE



**Free Catalog
Over 18,000
Audio/Video Products**

Whether your need is for replacement parts or you are a custom builder, Parts Express is the best source for pro loudspeaker components, crossover parts, wire and cable, and cabinet hardware—in stock and ready to ship right now.





Speakers & Components

Crossovers, Wire & Cable

Amps, Mixers & Microphones

Racks, Cases & Hardware

Visit us online today for your **FREE Catalog!** parts-express.com/par or call 1-800-338-0531

CONSULTING SERVICES



Lynn Fuston

Home Studio/Pro Audio
Consulting/Mentoring

615-364-9324
3daudio@charter.net

Also available via Skype

STUDIO FURNISHINGS

NEW DUAL15L



your gear
right
at your
fingertips

studio furniture
●●●●●ARGOSY.
www.ArgosyConsole.com

ACOUSTICS



Acoustics First
Toll-Free Number **888-765-2900**

SOUND AND NOISE CONTROL MATERIALS

Web Site www.acousticsfirst.com

To advertise in Pro Audio Review Classifieds

contact Zahra Majma:
ZMajma@nbmedia.com
212-378-0400 x517

For the latest industry
news and information visit
proaudioreview.com

The 500 List

[continued from page 37]

EVENTIDE

DDL-500, a digital delay featuring 10 seconds of delay at a 192 kHz sample rate and a unique design that strictly limits the amount of digital circuitry to the bare minimum.

eventide.com

FREDENSTEIN

F604, fully balanced gate with depth, threshold, attack-time, hold-time and release time controls, plus variable HPF.

fredenstein.com

JCF AUDIO

Levr, active summing amp.

mercenary.com

JLM AUDIO

HPM500, 6-channel mixer with switched panning per input.

jlmaudio.com

JMK AUDIO

JM-120, dual Hi-Z input DI preamp.

jmkaudio.com

LITTLE LABS

VOG, analog "Voice of God" bass-resonance tool.

littlelabs.com

MILLENNIA MEDIA

AD-596, 24-bit, 96 kHz, 8-channel A/D converter.

mil-media.com

MOOG MUSIC

The Ladder, based on the classic ladder filter design patented by Bob Moog in 1966, arguably offers "the backbone to the classic Moog sound," explains *PAR*'s Russ Long.

moogmusic.com

MOOKTRONICS MEDIA

PDI500, assive direct box module.

conwayrecording.com

PURPLE AUDIO

Cans, headphone amp, can double as control room preamp; Moiy, summing amp for Sweet Ten rack.

purpleaudio.com

RADIAL ENGINEERING

JDV LB, discrete, Class-A instrument DI; Reactor JDX, guitar amp and speaker interface; Phazer LB, phase-alignment tool; X-Amp, re-amplifying device; EXTC, effects loop processor; Submix, 4x1 line mixer; Tossover, a two-stem variable frequency divider; Chaindrive, 4x1 distribution amplifier.

radialeng.com

RUPERT NEVE DESIGNS

542 True Tape Emulator with Texture, featuring genuine tape drive circuitry and selectable 15- and 30-ips modes.

rupertneve.com

VALLEY PEOPLE

dyna-mite, a "really fast limiter that doesn't squash the processed program," and expander/gate with auto-release circuit.

valleypeople.com

XQP

531, optical de-esser based on Dane 31.

xqpaudio.com

MOOG ANALOG DELAY

Moog's 500 Series fully-analog delay module provides up to 800 ms "of smooth, natural and warm delay, adding an entirely new musical dimension to recording and mixing," offers *PAR*'s Russ Long. Its software editor plug-in "provides the same recall and automation flexibility typically only found in plug-ins."



Eventide

[continued from page 44]

out, and unbalanced quarter-inch mono "to amp" jack. Via its Aux eighth-inch jack, a four-conductor TRRS cable can even provide I/O with mobile devices, which allows, for example, microphone, two instrument input and stereo playback sub-mix capabilities.

An accomplished guitarist that I regularly record and collaborate with took the MixingLink home for a spin. He paired it with a distortion stomp box to create an elec-

tric guitar practice amp, delay and reverb stomp boxes for acoustic guitar live performance, personal IEM amp for his BGVs, etc. "It fits into my flow as a great starting point," he explained. "Last gig I just took my guitars and pedal board ... I can even mix just myself—vocal, guitars, looper, monitor. It's nice to just hand the other end of an XLR

cable to the sound man, and he has everything he needs from me the way I want it. I can't wait to play with it in the studio."

Visit eventide.com for a plethora of ways to employ the MixingLink. I predict it'll become a real workhorse for many audio types, perhaps even you.

Contact: Eventide | eventide.com

"MixingLink offers flexible routing, mixing/signal combining, re-amping, headphone monitoring, and more."

Dolby

[continued from page 46]

tablet, at dolby.com/us/en/technologies/dolby-atmos/transformers-age-of-extinction-video.html.

There are other Atmos examples, including music videos, on dolby.com.

The Amazon Kindle Fire HDX 8.9 (starting

at \$379) is a sweet tablet for entertainment applications. The Fire operating system has a rich feature set and the tablet a gorgeous screen. The built-in stereo speakers deliver more than you'd expect from a lightweight package.

The operating system is a proprietary variation of Android. Titles optimized specifically for Fire are limited in number and

come to market slower. Audio apps for Android that offer professional quality features are non-existent (see the "Android Void," Sept/Oct 2014 issue of *PAR* or here: prosoundnetwork.com/androidvoid). Atmos software is preloaded on only the larger of the two Fire HDX models.

More from Dolby here: <http://blog.dolby.com/2014/09/dolby-atmos-goes-mobile/>

NOW AVAILABLE for **your** reading pleasure...

Are you a current subscriber to *Pro Audio Review*? Grab your iPad and visit www.prosoundnetwork.com/PARipad to download your Pro Audio Review app.



Not a current subscriber? *Pro Audio Review* is the only U.S. professional audio magazine to focus on product reviews for all major niches. Each exclusive section covers: studio, live, contraction/installation, broadcast production, post-production and project studio. There is no obligation and getting *Pro Audio Review* on the iPad is easy –

Visit us at www.prosoundnetwork.com

- A Native Instruments Maschine Studio Groove
- B sE Munro Egg 150 Studio Monitors
- C Behringer X32 40-Channel, Digital Mixer
- D Neumann TLM 102 Large-Diaphragm
- E Moog Minimoog Voyager Monophonic Synthesizer
- F Neumann TLM 107 Multi-Pattern Large Diaphragm
- G Universal Audio Apollo Quad Core
- H Apple 15.4" MacBook Pro Notebook



B&H Delivers in Every Way

FREE Expedited Shipping on orders over \$49*

B&H is the world's leading Pro Audio equipment retailer

- The largest inventory
- Top industry experts on staff
- The most helpful customer service anywhere

Visit BandH.com the ultimate resource for all your Pro Audio needs

Be informed with B&H.com/Explora's huge collection of Pro Audio educational content:

- Articles • Tutorials • Trends • Reviews • Tips • Interviews
- Newly-Release Gear Profiles • Recorded Live Events • Streaming Videos



420 Ninth Ave, NYC
Visit Our SuperStore

800-947-1182

Speak to a Sales Associate
or consult with Live Chat online

www.BandH.com
Shop conveniently online

*Applies to In-Stock Items. Some restrictions may apply. See website for details.

NYC DCA Electronics Store Lic. #2006712, NYC DCA Electronics & Home Appliance Service Dealer Lic. #2007903; NYC DCA Secondhand Dealer - General Lic. #0907906 © 2014 B & H Photo & Electronics Corp.