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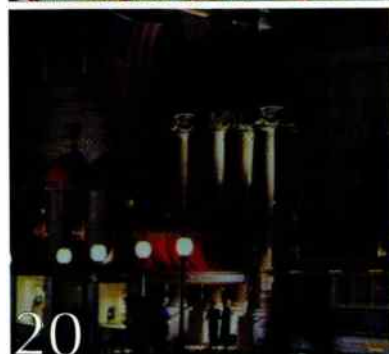
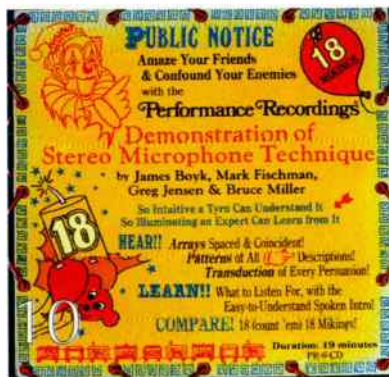
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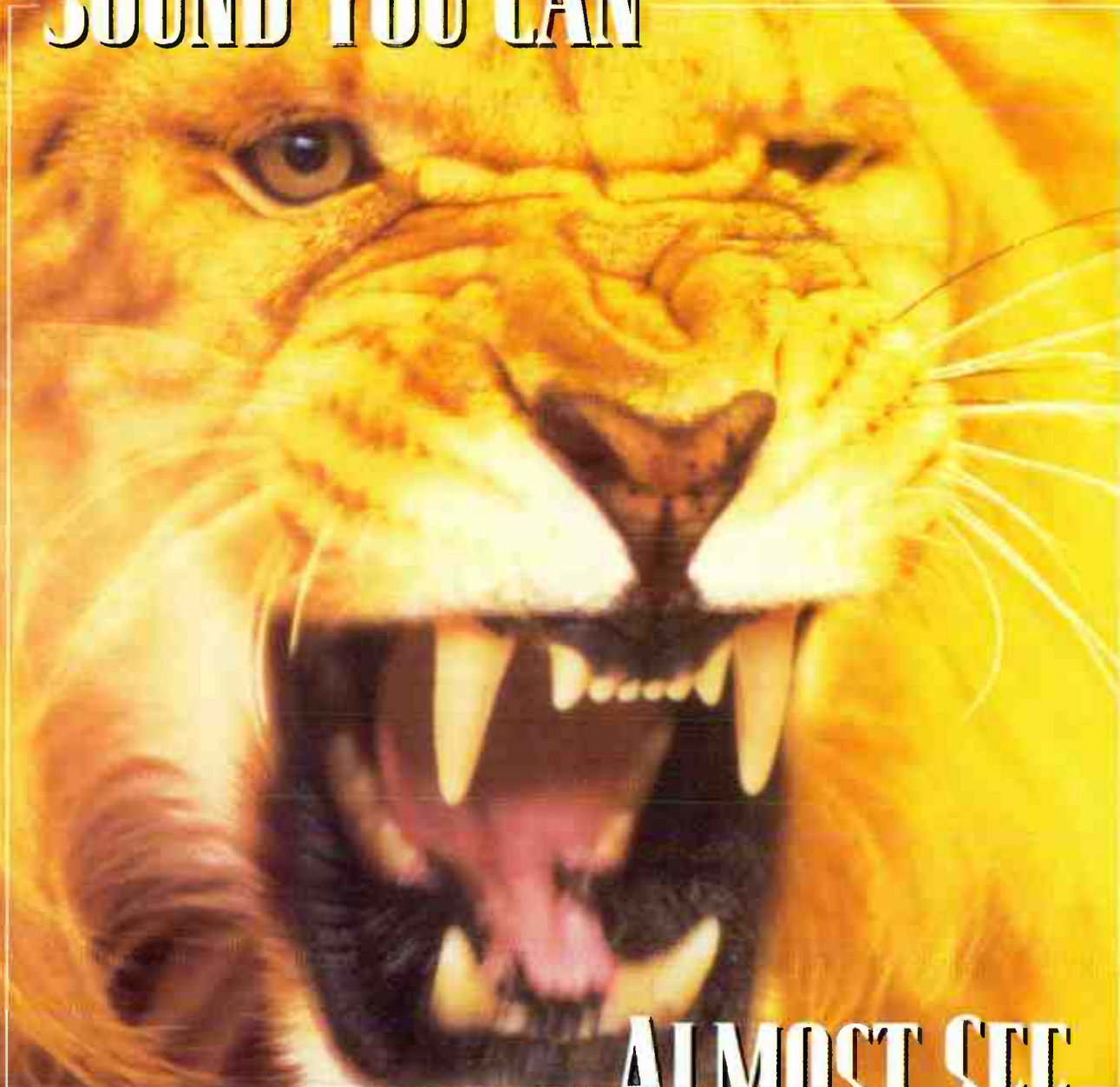
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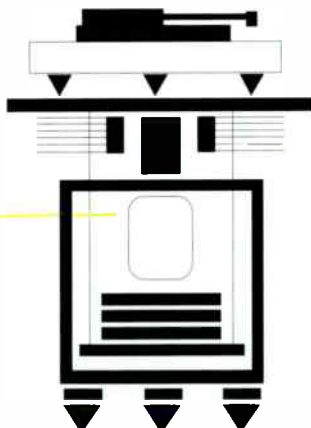
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No audio equipment in history has achieved the legendary status of the Marantz vacuum-tube electronics. So timeless are the sonic and aesthetic attributes of this classic trio that, almost four decades after their introduction, pristine examples are still eagerly sought by committed music lovers and audiophiles alike.

Fortunately for those remorseful souls who parted company with their beloved originals, Marantz proudly announces the reintroduction of the Marantz Classics. The Model 7 preamplifier, Model 8B stereo and Model 9 monaural power amplifiers sound as remarkable today as when they first defined the state of the art during the Golden Age of Stereo.

These recreations are true to the originals in every way. In many instances, parts like transformers and meters have been sourced from the very suppliers who furnished them over a generation ago. Faceplates, knobs and switches are identical, and even the Marantz logo has been restored for absolute accuracy. All wiring is point to point; no circuit boards have been substituted for the sake of convenience or cost. Only genuine safety improvements, like detachable IEC power cords, standard fuses, and contemporary speaker terminals in place of archaic output taps, differentiate these modern units from their predecessors.

Ultimately, these jewel-like components could have you listening to music from a whole new perspective, while providing the kind of satisfaction that comes from possessing a timeless classic.

So instead of kicking yourself, you can sit back and enjoy the company of a long-lost friend.



marantz

New Products

The VLS Auri Personal Home Theater System

accurately reproduces 3D surround sound over ordinary headphones by use of Virtual Listening Systems' Toltec processing, which is based on the principles of binaural hearing, head-related transfer functions, and advanced digital signal processing. Using Dolby Pro Logic signals, and running on a Motorola 56000 80-MHz, 24-bit DSP, the system is said to present a strong 3D soundstage despite the use of only two channels. \$499.95.

Data: 352/379-0807.



The Fostex CR200 CD-R Compact Disc Recorder

will record in both professional and consumer CD formats and can use as the master any source, from cassette, hard disk, minidisc, or DAT, to produce a finished compact disc recording.

Featured are three digital synchro recording modes, which allows the recorder to be synchronously started from a master DAT player using a S/P DIF connector; a digital fader/digital copying codes selectable via rear panel DIP switches, balanced XLR and AES/EBU inputs, and an infrared remote control. The CR200 will also convert any digital input signal from 32 kHz to 48 kHz into the CD standard 44.1 kHz. \$2,195.00.

Data: 310/921-1112.



The Quicksilver Audio V4 Amplifier

is an all-tube monaural design which uses no circuit boards or transistors. The costly and time-consuming technique of point-to-point hand wiring is used to build the amp for maximum sound quality and excellent reliability. Buyers may choose between KT88, 6550, 6L6 or EL34 tubes, which are powered by a low screen voltage of 300 volts to help ensure output tube reliability and long life. There is a chassis-mounted meter and individual bias controls for each of the four output tubes, while a separate power supply for the output stage helps deliver excellent sound even at maximum power output. \$3,800.00 per pair.

Data 702/825-1514.



The Basis 2800 Turntable

Coming just a year after the successful introduction of the Series 2000 at Hi-Fi '96, the 2800 features the integral arm-board, fluid-damped suspension, and reduced footprint of the 2001 combined with the proved high-mass platter, precision bearing, and vacuum-clamping system of the Basis Debut Gold Vacuum turntable, which lists at \$10,600. Owners of the Basis 2000 or 2001 turntables can upgrade to the 2800 for simply the price differential between the models. \$7,500.00.

Data: 510/420-0379.



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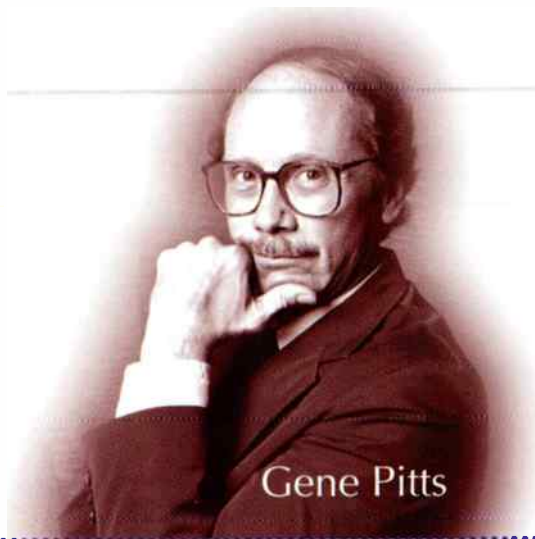


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Head of the Line



Gene Pitts

Last year, there was an industry anniversary I didn't publicly celebrate, but because it's never too late to do right, I want to tell you about it. Reference Recordings was 20 years old in 1996, and I offer them my hearty congratulations, as well as an apology for being a year late. Good job, you good people, may you have many more.

I was reminded of this event by a letter and phone call from Reference's Operations Manager Rik Malone, who gives over much of the credit for the accomplishment to the label's Technical Director and general all-round audio and recording guru, "Prof." Keith Johnson; founder and President, Tam Henderson, and Executive Vice President Marcia Martin. A wonderful vision these folks displayed in their work over the years, while inspiring Reference's mid-level personnel, such as Rik and Jan Mancuso, who in turn passed it along to the press corps.

This small independent record label has made some truly first-rate recordings over the years, despite the difficulties of being gentle and small in a world of hungry giants. They go their way, fierce in their dedication to classical music and to the highest recording standards. They have won a Grammy outright and been nominated for five more. They've gotten two Golden Note Awards from the Academy for the Advancement of High-End Audio. They've received a NAIRD Indie Award for Best Original Recording. Besides industry recognition, their business vision seems pretty good, too, inasmuch as their first two discs with the Minnesota Orchestra sold more than 10,000 copies each during their first year of release when normal lifetime sales for full-price classical releases is under 5,000 discs.

And then there is Reference Recording's pioneering use of the HDCD system, co-invented by Prof. Johnson; half-speed LP mastering; UHQ LP pressing; Direct Metal Mastering for LPs; Digital Bin Master cassettes, and their unique "direct-to-CD" recordings.

It seems appropriate, therefore, to say, "Do it again, guys, more, more."

Another Accolade

Ray Dolby, founder and Chairman of Dolby Laboratories, has collected a batch of awards this year. Most recently, he was the 44th recipient of the American Electronic Association's Medal of Achievement. In making the Award on Sept. 9th, 1997 AEA Chairman and Vice Chairman of Centigram Communications George Sollman said, "Ray Dolby is a true entrepreneurial pioneer in the field of sound recording and reproduction. From the high-quality cassettes we play on our car stereos to the latest digital surround in movie theaters, we are constantly touched by the magic of this American inventor." Earlier AES Medal of Achievement recipients include William Hewlett and David Packard of Hewlett Packard, Thomas J. Watson, Jr., of IBM, and Alexander M. Poniatoff of Ampex.

Earlier this year, Dolby received the U.S. National Medal of Technology, the IEEE's Masaru Ibuka Consumer Electronics Award, and an honorary Doctor of Science degree from Cambridge University.

Most-Unlikely Idea Dept.

Disposable DVDs for retail film rental, already licensed by Circuit City, use a special encoding named Dvix and would be made by Zenith, et al.

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TEST DISCS- an eclectic collection

Howard Ferstler

The following reviews are reprinted in part from material previously published in the Southeastern Michigan Woofer and Tweeter Marching Society (SMWTMS) magazine, *LC*. Additional recordings have been added to make for an even more exciting reading and listening experience. Howard Ferstler has written three books on audio and audio/video. The first, *High Fidelity Audio-Video Systems*, was published by McFarland in 1991. The second, *High Definition Compact-Disc Recordings* (a guide to the sound of over 1,400 demo- or near demo-grade releases), was published by McFarland in 1994. The third, *The Home Theater Companion*, was published by Schirmer Books earlier this year. A new manuscript, another compact-disc, sound-quality compendium of reviews, has been accepted for publication by A-R Editions. He is a full-time columnist for *The Sensible Sound*, and will be writing essays for *The Audiophile Voice* on occasion. -- Gene Pitts

Only a jaded audiophile will not be excited by good test discs or "serious" samplers that highlight the outstanding performance of his system. As a guide to the current state of the art in such discs, I've put together some brief reviews. Needless to say, these transcriptions have some very compelling musical sounds, as well as excellent audio and sometimes video test sequences. While some of the musical material is unique to these discs, and designed specifically as test material, a few discs contain excerpts from company catalogues. However, no matter the source, the technical quality of the musical programs is of high enough calibre to qualify as test material.

In most cases, each album booklet describes the test procedures (some materials were pre-production versions and lacked printed guides), but others also describe the recording techniques used to make the music. While the quality of these

discussions is variable (with a few substituting pseudo-technical hype for real engineering information), a few are miniature, but scrupulous, tutorials on recording, sound-system, and even video theory.

Nearly all the discs contain test and musical tracks that will fully exercise even the most-potent stereophonic and surround-sound systems. Consequently, I believe any serious enthusiast should own at least a couple to use as a tool or reference standard. However, a few presentations, usually those which also spout some hyperbole in their inserts, have a bit of material of dubious value.

There are many samplers and digital test discs available these days and more are appearing regularly. Those below are just a few of the better ones I had at the time at the time I put this essay together. If any future test/sampler discs are assembled by the same people who did the material listed, you can be pretty certain that they will also be worthwhile purchases.

Auditory Demonstrations Prepared at the Institute for Perception Research, Eindhoven, The Netherlands, in association with the Acoustical Society of America. Philips 1126-061. This is a remarkable disc, that on the surface appears to contain little which would ordinarily interest a lover of recorded music. However, its 39 very interesting psychoacoustic tests will tax everyone's hearing abilities and teach them a great deal about





what it actually means to hear.

While the information packet that comes with the disc contains everything necessary to understand the tests and put them to good use, one will gain

further insight by

reading "Auditory Demonstrations on Compact Disc," by William Hartmann, in the January, 1993 issue of the *Journal of the Acoustical Society of America* (volume 93). Techno-nuts will fall in love with this disc, but it is important to remember that these materials are not standard recorded musical sounds.

Chesky Sampler, Volume 1: Chesky Jazz Sampler Recorded 1988-89, mostly at RCA Studio A, New York City; the engineer was Bob Katz. Chesky JD-37. A combination of samples from Chesky master tapes, this cross section of what Katz considers good sound plus assorted test signals will be interesting to enthusiasts who want to evaluate imaging and desire good illustrations of minimalist recording techniques. The vertical-imaging demonstration is entertaining (and has been used at times by speaker tester Julian Hirsch in *Stereo Review*, as well as a few other writers) and will reveal weaknesses in speaker sound-staging capabilities and placement asymmetries.

Vertical imaging has as much to do with frequency and phase response as the position of the source relative to the mike. While I am not familiar with how the Chesky people did their test, it is known that adding a sharp notch filter, centered at about 8 kHz, will subjectively elevate the instrument being reproduced. Adding notch filters at other frequencies will move the image focus to other locations. This is a simplistic explanation, of course, and the Chesky technique may have involved the LEDR test formulated by Gary Kendall and William Martens, written up by Bert Whyte of *Audio Magazine* (among others) several times in the past. How assorted frequency- and phase-response manipulations will impact the hearing mechanism will also depend on such things as individual ear pinna shapes and head-related transfer functions, so the Chesky test will have subtly different effects on each of us. Listen

to this test section on several good but different systems to get an idea of what it should sound like. The functional but also notorious "Bonger" test on the disc can be used to evaluate the low-level artifacts of a CD player. However, because the initial part of the test signal made on Chesky's custom processor was over-driven and distorted during the recording process, the track should be used carefully.

Some individuals believe that an absolute-phase test is irrelevant, particularly with speaker systems having low asymmetric (even order) harmonic distortion and when the listener occupies the reverberant field, although it may be meaningful if listeners utilize headphones. To me, absolute phase appears important mainly to enthusiasts who want to "hear" things, particularly if they enjoy dealing with test tones. Chesky's use of "128-times oversampling" also appears to me to be pretty much audibly inconsequential, despite Chesky's great-sounding recordings. Although I am certain that its effects are measurable, it could make the signal worse. I believe that their use of the procedure involves some sales psychology as well as audio technology. (At times, small recording companies apparently feel that they need to use a high-profile technology to get the attention of the serious audio-buff record buyers who help keep them in business.) The usually very fine sound of Chesky's recordings mostly results, in my opinion, from the proper use of good microphones, adherence to minimalist microphone techniques, and careful attention to mixing, rather than the high sampling rate.

Chesky Sampler, Volume 2: Best of Chesky Jazz and More Engineered by Bob Katz. Chesky JD-68. More remarkable tests and album excerpts from Chesky, done, I assume, at a variety of locations over a period of a couple of years. The imaging and sound stage tests are revealing. The tests on D/A converters and digital cables meant nothing to me but maybe your system can resolve such nuances, although it pays to keep a cool head as



you try to spot such things. As usual, the musical selections are first class.

Chesky Sampler, Volume 3: Best of Chesky Classics & Jazz and Audiophile Test Disc Musical sections engineered by Bob Katz and Jeremy

Kipnis. The audio demonstration sections and test material produced by David Chesky, Bob Katz, and Steve Guttenberg. Chesky JD-111. Continuing the Chesky tradition of combining album excerpts and test sequences, this release is potential-



ly even more helpful than either of the first two volumes, because it carefully outlines a variety of microphone and recording techniques, even including diagrams to help understanding. However, the sections dealing with 20-bit technology (particularly those comparing 20- and 16-bit coding) seem misleading, and the track dealing with power isolation is so useless that it receives an apology in the accompanying booklet. In addition, the track designed to "break-in" speakers is to me a joke, one that might damage equipment. However, most other tracks are very interesting.

Demonstration of Stereo Microphone Techniques Engineers are James Boyk, Bruce Miller, Greg Jensen, and Mark Fischmann. Performance Recordings PR-6-

CD. If you want to hear what a number of different microphone types and placement techniques sound like, this 19-minute disc is the recording for you. This is one of the most interesting "test" tools available and a must for any audio enthusiast who wants to learn more about the sound of recordings. The main goal of the producers was to demonstrate the stereo imaging produced by a variety of recording methods. A secondary goal was to demonstrate the kind of

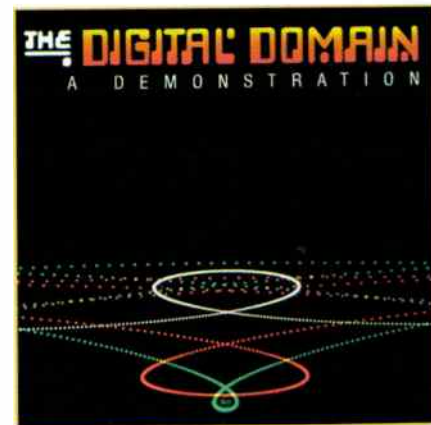


tonal quality available from several microphone types. The first goal was magnificently achieved; the second less so.

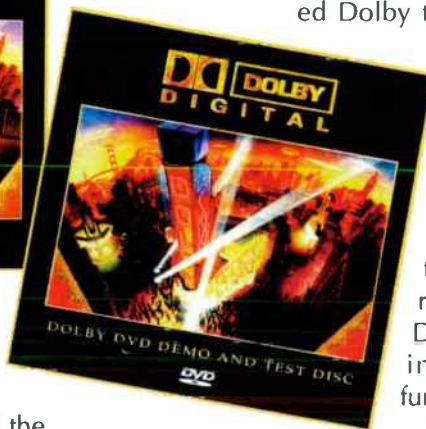
A weak point in the production is the lack of any data on how microphones in halls behave in terms of properly handling ambience, especially that reflected from the sides and rear. However, dealing with reflected ambience, given the small scale of the sound stage and the tools used, was obviously not a goal of the producers. I felt the lack of any example of the "Decca Tree" recording technique, which places the center microphone of a three-capsule array considerably out in front of the flanking mikes. There was an example of a standard "three omnis in a row" configuration, similar to what is used by Telarc, although the spacing between the capsules was much smaller. Still, this disc is worth every penny of its nearly dollar per minute cost.

The Digital Domain: A Demonstration Elektra 9 60303-2. This is a good selection of electronic music and test sequences put together by the Stanford University Center for Computer Research in Music and Acoustics back in 1983. The opening jet-plane sequence should be run at low volume at first, to give the operator an idea of the final sound levels involved and thus prevent speaker damage. For sound-effects nuts, this piece alone will be worth the price of the disc. Test tones are also available (sine waves, pink noise, etc.), which can help you calculate volume control or power output settings if you have power meters on your amplifier or receiver. The tones can also assist you in adjusting a real-time analyzer.

An important warning should be made here about the square-wave test on track 19. This should not be played back through speakers at all, since even a small advancement of the volume control could fry some speaker drivers. An announcement on track 18 warns about possible speaker damage on the next track, but it is still possible to punch a programming-sequence button by mistake and immediately land your speakers in a whole lot of trouble. The announcement should have been on the same band as the test tone, directly ahead of it, making any kind of accidental sonic disaster more difficult.



Dolby Digital Demonstration and Test Laser Disc, Version 2.0 and Dolby DVD Demo and Test Disc, Revision 1.0. Both released in 1997, these two items are included here under a single heading, because they both incorporate many of the same test, demonstration, and musical sequences. While not identical, they are close enough to rate a dual review.



The LD version is the least versatile, but easiest to use, if only because the table of contents is on the slipcase back, and thus easier to interpret than the on-screen menus and highly technical manual of the DVD version. (One must depend on the manual to interpret many of the signals, and even then a background in digital technology may be necessary to make sense of some of them.) The LD has a variety of test sequences, including high-level test signals (a polarity phase pulse, pink noise, down-mix overload test, D/A converter test, assorted full-scale test tones, etc.), frequency sweeps, low-level test tones, Pro Logic tests, channel checks, and null tests.

While some of the material in these sequences can be employed as rudimentary alignment and basic checkout tools by those who have Dolby Digital setups, a few tracks need outboard test gear to interpret. What's more, the basic ones are so "basic" that once completed they really need never be done again, unless one gets a new player or surround processor or the old player and processor begin to act up. Paradoxically, if the latter occurs, it probably will not be necessary to use a test disc to determine that something is wrong. Still, the tests are entertaining.

A few musical selections are also on the LD, including "Fly," courtesy of Godot, a Seattle-based group, and "Even If You Wonder," courtesy of Earth, Wind, and Fire. These sound very good indeed, even at the much maligned 384-kbps bit rate, and were made even better when I engaged the Dolby Digital "enhancement" function of my Yamaha DSP-A3090 surround amp. If there are digital artifacts due to the degree of data reduction used, it was not readily apparent in this production. The "Even if..." selection is supplied in both

5.1- and 2.0-channel mixes for comparative purposes, with the former winning hands down. (I note the A3090's jazz-club ambience simulation, when used with the 2.0 mix, gave the 5.1 mix a real run for the money, in terms of real-world, live-music ambience.)

In addition to the test sequences and musical excerpts, the LD also contains copies of assorted Dolby theater trailers (ads,

basically, which you may have already seen at the beginning of some AC-3 encoded movies), plus an introductory section that explains the rather interesting Dolby Digital story, including features, functions, and frills.

The DVD is a bit more ambitious, with considerably more material than the LD version, although some stuff, like the Godot musical excerpt, was not included. In addition to the Dolby Digital story and the trailers, the DVD release includes some new music, including a snippet from the new Delos surround recording of the "1812 Overture" (the finale), coded at a bitrate of 448 kbps, plus "Dixit," coded at 384 kbps, courtesy of The Consort of Voices. Note that most of the material on the disc is coded at 448 kbps, which apparently is the bit rate that will be used for most, and possibly all, DVDs.

**Test and Demo discs
don't have to be boring;
just try any of these.**

The number of test sequences supplied on this disc is huge, and includes 2.0- and 5.1-channel gain and dynamic range tests, frequency-response sweeps, DPL decoding (from a 5.1-channel mix), polarity, dialogue normalization, D/A converter tests, 5.1-channel pans, error concealment, noise modulation, distortion, noise (pink and white), compression, and downmixing, among others. Many of the tests need external hardware to properly interpret, and a few (according to the screen menus) require the manual to make sense of them.

Unfortunately, the manual is so basic that it also requires a bit of technical knowledge on the

part of the user to make sense of it. The booklet does not explain the audible significance of many of the tests, leaving it to the user to figure out whatever subjective differences, if any, they might

hear between some of the comparison tests.

A number of those tests look pretty esoteric, such as the musical excerpts done with a variety of coding rates, bandwidths, and couplings. I listened to all of them, but even

with the manual, it was

difficult to decipher what some of the combinations were supposed to be telling me. However, they all at least sounded impressive and artifact-free.

Both discs also included a few video tests, but unless you are a video engineer, or have a copy of Joe Kane's Video Essentials or A Video Standard on hand, to give you an idea of what some of the test patterns are supposed to do, they really will not mean much. The manual had no data on the video tests at all. Each disc ended up with a "credits" section, listing the people involved in each production.

While these discs were fascinating to use, I feel that they would best be purchased by researchers, by audio/video magazines needing test material, by serious A/V emporiums needing test tools to help customers set up their systems (with serious experts on hand to interpret things), or possibly by audio/video clubs, which could loan them out to members.

Delos, in cooperation with Dolby, was scheduled to release their new DVD Spectacular disc this past summer. I have a pre-production version of this basically audio-only release, and many of the test sequences are identical to some of the more straightforward, easier-to-use ones on the Dolby DVD test disc. In addition, the Delos disc has the full "1812 Overture" on it, in all its overblown glory. (I am sure that Tchaikovsky rolls over in his grave every time this number is performed anywhere, by anybody.) After experiencing the musical programs on this disc, I can say

without blushing that as far as I am concerned (and in spite of what has been implied by the DTS camp in assorted printed flyers and Internet postings, as well as by certain high-end critics), Dolby Digital is fully capable of handling even fairly complex musical material with aplomb. While I have not done any direct DD/DTS comparison listening, I think the DD data-reduction system is certainly good enough for any motion-picture work you might care to experience.

The Delos disc also has a magnificent performance of the "Piano Barcarole," by Richard Rodney Bennett, with Carol Rosenberger playing the piano, a technically marvelous transcription. Perhaps the new spate of audio-only recordings by DTS are theoretically better, but it is hard for me to believe that they will be audibly cleaner sounding than what I heard on this disc. Famed engineer John Eargle did all the musical recordings, incidentally, and if he is at home with Dolby Digital technology, so am I.

Engineer's Choice Produced in 1991, but recorded over a period of years, this is a sampler featuring 22 excerpts of material recorded by John Eargle. Delos DE 3506. Eargle, who, because he is intimately acquainted with how it should sound, apparently carries this disc with him when he wants to evaluate home, showroom, and studio playback systems. I cannot think of a better portable test tool, because the recorded sound is terrific. In addition, the insert that comes with it gives interesting information on the microphone techniques used, as well as the various recording environments encountered during its production. Eargle offered a technical description of his work in the October, 1991 issue of Audio Magazine. Even though they are not surround encoded, the selections are very good at helping an individual gauge the effectiveness of a surround processor.

HDCD (High Definition Compatible Digital) Sampler

Excerpts from assorted Reference Recording discs featuring the High Definition Compatible Digital (HDCD) recording process. Engineered by Keith Johnson. Reference Recordings RR-S3CD. Like Chesky, Reference Recordings caters to high-end audio buffs, and depends to some extent on a customer-perceived





edge in digital technology to attract listeners. As best I can detect, the full HDCD system is a compression/expansion or noise-shaping process that (as I am sure everyone knows by now) requires a separate decoder to realize its full

potential. Subjectively, the decoder mainly behaves like a low-level and peak limiter (working in the digital domain, rather than as an analog device) that impacts the resulting signals only at volume-level extremes. Without the decoding circuitry, the low-level signals, at least on some tracks of this compendium, may have a slight tendency to be pumped up and down in loudness, and the compression at higher levels may result in a perceived increase in overall loudness. The undecoded signal also seems to amplify the fade-to-silence reverb of the hall, subjectively highlighting background ambience and imparting a degree of "wetness" to the sound. Because of the way the decoding takes place, a few listeners may actually prefer the sound of HDCD recordings undecoded. Although the initial recording technology is said to be 24 bit, the final compact-disc product has the expansion instructions under the command of a code embedded in the LSB of the recording, reducing the part that handles the music to 15-bit resolution during passages where dynamic range must be expanded. Pacific Microsonics claims this is sonically inconsequential because the LSB is swamped in the high-level signals. I should also point out that one critic states the HDCD encoding process creates occasionally pleasant-sounding dynamic-range changes that the decoder eliminates, meaning that the end result is no better, and possibly worse, than if no HDCD system had been involved at all.

In any case, it seems to me that the main reason this particular recording sounds impressive to a lot of listeners is because of Johnson's microphone techniques, which tend at times, even without HDCD, to produce a "wet," somewhat reverberant ambience that works well in a lot of home listening-room environments. After listening to a number of other RR releases, I am also convinced that Johnson is a master at placing accent microphones to effectively capture attention-getting percussive and pipe-organ dynamics.

Hi-Fi News and Record Review Test Disc II This is an excellent series of tests and musical excerpts from a variety of sources, engineered by the highly respected Tony Faulkner. *Hi-Fi News and Record Review* HFN 015. Two warnings are in order when working with this material. First, some very clean test tones, running from 2 Hz (!) to 20 kHz, are recorded at maximum (0 dB) level. Thus, it is mandatory that the volume be kept fairly low during playback unless you wish to incinerate a tweeter voice coil or launch your woofer cone out into the listening room. CD levels this high may also overload certain signal processors installed in an external processor or tape loop. Second, the central image in the early spoken "walkaround" test sections (this is done both in stereo and with Ambisonic encoding) are slightly skewed to the left side, very unusual, given the care that was lavished on the rest of the material.

Further into the test sequence, an excellent central-image test apparently copied from an earlier Denon test disc (number 33C39) will validate the problem with the first series and accurately evaluate central imaging. The musical excerpts on this disc are uniformly excellent, and will highlight the abilities of nearly any audio system.

King of Instruments This is a listener's guide to the art and sciences of recording the organ, with short excerpts from Bach, Gherardeschi, Buxtehude, Lefébure-Wély and others, along with written descriptions by John Eargle of the recording techniques employed. Delos DE 3503. This is a remarkable series of excerpt recordings taken from the Delos catalog. The variety of microphone techniques used are clearly described in the insert. Needless to say, this is an outstanding educational



guide to the art and science of recording organs and an equally outstanding example of state-of-the-art recorded sound.

The Very Best of Erich Kunzel and the Cincinnati Pops Recorded between 1983 and 1992, in Music Hall, Cincinnati by engineer Jack Renner. Telarc 80401. This is an outstanding compilation of sound effects and music recorded by Kunzel and Renner over a ten-year period, remastered and sometimes surround-enhanced.

The sound runs the gamut from excellent to near-incredible, with some tracks intensified by a surround-encoding technique called "Spatializer." This technology (which is different from the NuReality SRS system sometimes confused with it) has the ability to present a three-dimensional, almost surround sound-like effect with only two front speakers. It does this by inter-aural crosstalk cancellation and shaping the ambience signals so that they partially mimic the side and rear response contouring of the outer-ear pinnae, creating "phantom" surround speakers. (The "pro" version of Spatializer is different from the consumer version, and is similar to the pro system from Q-Sound.) The result is a greatly expanded frontal spread and increased sense of hall space.

One can get a partial idea of how this technology sounds by listening to conventional stereo recordings when decoded by a consumer-grade processor the Spatializer company markets for home use, or listening to the same material after decoding by a Carver Sonic Holography device or certain Lexicon surround processors, or employing Polk SDA speakers; all these feature inter-aural crosstalk cancellation.

The Spatializer process itself cannot guarantee the tonal accuracy, clarity, and impact of a recording. I've heard pop releases thus encoded and most were not impressive beyond the sometimes attention-getting stages and ambience.

Spatial effects aside, the dynamics on this Telarc recording are at times spectacularly impressive, and individuals with less than monumental

speakers, amplification, and home structural integrity should tread carefully during the first playthrough, particularly when encountering the sound effects or ultra-deep bass. The orchestral sound is typical for Telarc at its best, with excellent clarity, good imaging and a wide, deep, spacious sound stage. Bass enthusiasts will definitely want this disc, because there are some genuinely astounding sections, both musical and wildly synthesized, that will tax even the most robust subwoofer systems. (There are fine-print warnings for the mega-bass demo tracks and those with speaker systems employing bass-reflex woofers, which are not self-protecting below resonance, or strongly equalized low-bass woofers of any design, should take care to see that those drivers are not sent to an early oblivion.)

This disc has a short selection at the end called "Jurassic Lunch," culled from Telarc's *Great Fantasy Adventure Album* (number 80342), that some enthusiasts will consider worth the cost of the album all by itself.

Stereophile Test CD Engineered by John Atkinson and Robert Harley, this 1990 production contains interesting and educational excerpts from recordings made over the years by Gordon Holt, John Atkinson, Robert Harley, Peter Mitchell, and Brad Meyer. It also contains some interesting test sections. STPH 002-2. The disc is available from *Stereophile Magazine*. Many of these musical selections are remarkably good and the descriptions of how they were done are often worth reading. The disc also has some important and revealing comparisons between a number of commonly used microphones, and you will be surprised at how different the assorted models are from each other. Correlated and uncorrelated pink-noise tones are also available, with the latter being unusual in a test disc. Uncorrelated noise can be helpful in set-



ting up certain kinds of dematrixing surround processors and doing stereo soundfield measurements with a real-time analyzer or even a sound-level meter. The disc also has some unusual

tracks, one of which, the "warble-tone" test, is not much help, because the device used to produce it was apparently out of whack during its production.

Unfortunately, that is not the only problem. I feel that some of the comments about critical A/B testing in the accompanying booklet will be

misleading. Users and readers should be aware of the prejudices of some of the discs producers when it comes to objective test measurements and double-blind listening comparisons.

Stereophile Test CD2 Engineered by John Atkinson and Robert Harley. STPH 004-2. (Like the earlier version, this is available from the magazine.) This 1992 production is philosophically akin to the first *Stereophile Magazine* disc (STPH 002-2), although the content is different. New musical tracks are included, and while the notes on the back of the box indicate that a great deal of high-end audio gear (expensive cables, A-to-D converters, etc.) was involved in the production, the sound quality is no better than that found on many releases by companies using less esoteric equipment.

The overall playback level seems a bit low (perhaps a wasted attempt on the part of the producers to eliminate any chance of digital overload), but the possibility of hearing any noise from your amp or digital artifacts from your CD player (as the gain of the former is turned up to compensate) is eliminated by the background noise from the mostly AAD and ADD source material.

While the musical selections are decent in terms of perspective, depth, clarity, and ambience, they lack a workable degree of you-are-there realism because of the intrusive hiss. (Background noise of this kind seems to be a "badge of honor" for certain small-label CD producers, many of whom are obsessed with analog recording gear and electron-tube hardware.) According to the

insert, the producers are quite aware of the noise and state that most of it is the result of the tube microphones. It does not matter where it came from; it should not be on the recording.

The pink-noise sections are useful, particularly the stereophonic, uncorrelated sequence if one has a microphone-fed RTA to help in placing and equalizing speakers. This section can also be useful in double-checking surround-speaker levels, although an RTA is still needed for proper tweaking and better results will be had with source material specifically designed for the job. (A good RTA will have a built-in pink-noise generator.)

The harmonic-distortion test-tone comparisons are interesting, but their usefulness is limited, because pure tones give little idea of the effect of such distortion on musical material. Music has many complex overtones that tend to mask distortions audible with test tones. The tests dealing with digital "jitter" appear to me to be nonsense. I wish the recording had included additional microphone comparisons, beyond what the first disc offered, because the latter left out some important models.

Stereophile Magazine has produced a new test disc, but I have been too busy with other things to order a copy. It is likely that it will be as useful as the previous discs.

Surround Spectacular A matrix-surround encoded, two-disc set containing excerpts from the Delos catalog and a series of test sequences. Delos DE 3179. With the matrix-encoded musical sequences put together by John Eargle, Stephen Basili, and Al Swanson, and some spectacular sound effects engineered by Brad Miller, it is hard to imagine a better array of music and system exercisers than this. Just as impressive are the series of surround-

sound and woofer tests engineered by David Ranada. These are very basic (although some work better if you have a sound-level meter), and are very well explained in the enclosed printed



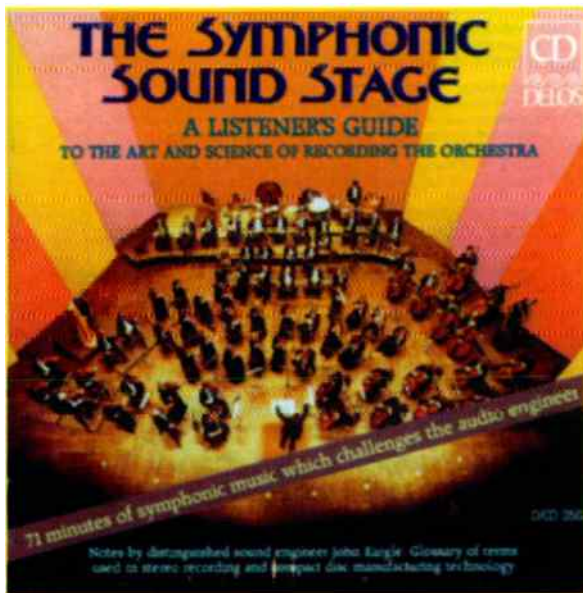
booklet. Unlike some of the surround-sound tests put together by others, this release, with probably the best Dolby Pro Logic tests available, will show you what your matrix-surround and synthesized-ambience systems are doing.

The Symphonic Sound Stage A listener's guide to the art and science of recording the orchestra includes 11 excerpts from symphonic performances, all engineered by either John

Eargle or Marc Aubort. Delos DE 3502. These short passages can help a knowledgeable listener to quickly evaluate important aspects of system performance, particularly speakers and their placement. These are commendable examples of the current state of the two-channel stereophonic recording art (in spite of all being produced prior to 1987), accompanied by very worthwhile descriptions of the techniques used.

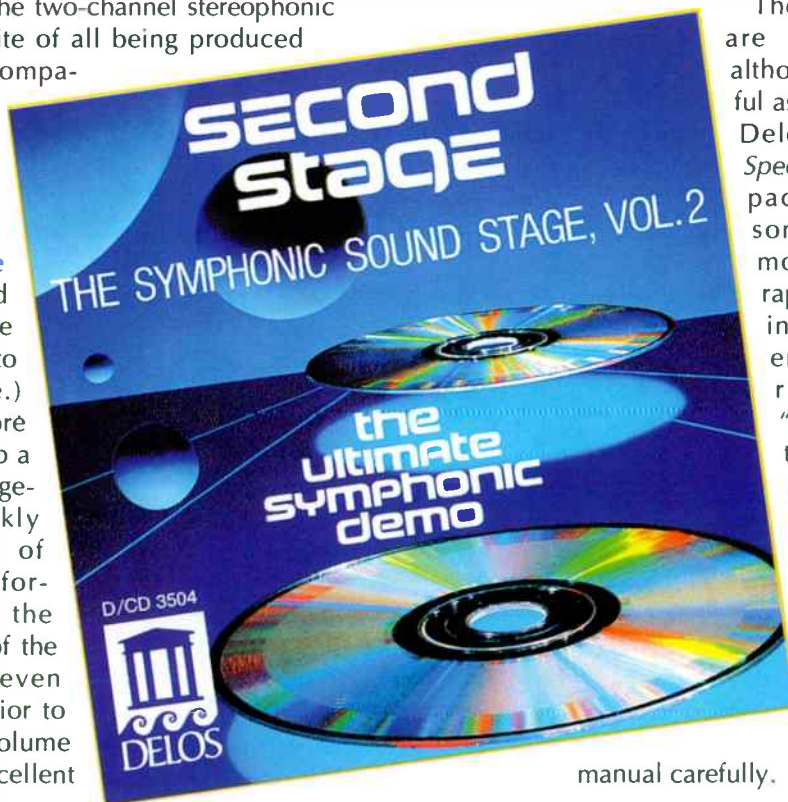
The Symphonic Sound Stage, Volume 2 (Subtitled Second Stage and with more excerpts but similar to those just above.) Delos DE 3504. More material that can help a reasonably knowledgeable listener quickly evaluate aspects of sound-system performance. As above, the examples are state of the two-channel art, even though produced prior to 1989. While both volume one and two are excellent

educational tools, those wanting top-grade examples of matrix-surround techniques should look to *Surround Spectacular*, above, also produced by Delos.



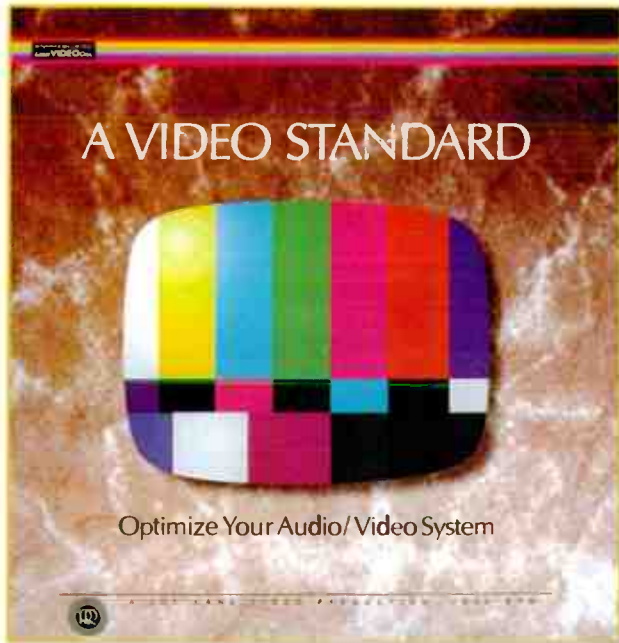
A Video Standard (A 12-inch LaserVideo disc designed to "Optimize your Audio/Video System"). Reference Recordings LD-101. This disc, produced by Joe Kane, of the Image Science Foundation, is apparently equal to thousands of dollars worth of test hardware (assuming you have an LV player) and, combined with its encyclopedic instruction manual, is a veritable tutorial in audio and particularly video.

The color and resolution charts will help you to align a TV monitor expertly, and the audio sections are nearly as helpful. The package comes with a blue filter for use with some of the color charts. (Because there is no pause or warning prior to their appearance during the moving program, many of the video "stills" will automatically flash past rapidly during normal play. To lock into them, you must quickly hit the still button on your player and then move through any required sequence of tests with the player's frame-advance feature.)



The audio tests are workable, although not useful as those on the Delos *Surround Spectacular* compact disc, and some sections move along rapidly, requiring viewers to engage the repeating "loop-through" feature of their players if they want to effectively use the sections. Be prepared to spend time reading the

manual carefully.



Note that Kane has produced an easier-to-use version of this disc, *Video Essentials*, and, by the time you read this, his new DVD version with the same title should also be available, with my backordered copy in my happy hands.

WHERE TO GET THEM

Acoustical Society of America, 500 Sunnyside Blvd., Woodbury, NY 11797

Chesky Records, 355 West 52nd St., 6th Floor, New York, NY 10019

Dolby, Inc., 100 Potrero Ave., San Francisco, CA 94103-4813

Delos International, 1645 No. Vine St., Suite 340, Hollywood, CA 90028

Elektra Records, 75 Rockefeller Plaza, New York, NY 10019

Hi-Fi News & Record Review, Link House, Dingwell Ave., Croydon CR9 2TA, England

Performance Recordings, 2135 Holmby Ave., Los Angeles, CA 94107

Reference Recordings, Box 77225-X, San Francisco, CA 94107

Stereophile Magazine, PO Box 1702, Santa Fe, NM 87504-1702 1/800/358-6274

Telarc Records, 23307 Commerce Park Rd., Cleveland, OH 44122 1/800/321-7152

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Hi-Fi '97

San Francisco Highlights



The Westin St. Francis on Union Square was the site of Hi-Fi'97.



The Audiophile Society's Mr. Ambiophonics, Ralph Glasgal, hanging out in the Echo Busters booth with the Michael Kochman (Mike's in the back talking echoes with another satisfied customer). Seems like Echo Buster wasn't doing that bad either, what with all the rooms using their items to help create great sound. Not bad looking things either.

H

i-Fi '97, *Stereophile's* Home Theater and Specialty Audio Show, was held last year in the Big Apple; this year it was staged in the beautiful Westin St. Francis Hotel in downtown San Francisco. Going to the City by the Bay was a special treat for me because it reminded me of my days in the air force, when I was stationed only a stone throw away in Fairfield, California. Vivid memories of a time long gone invaded my mind.... When I was 20, I used to....

Anyway, this time I was there for equal portions of business and R&R, as we would say back in AF days. But I'll tell you this much, the town is more beautiful than ever and I enjoyed the stay immensely. My buddy, Chin Chuh, an avid audiophile, had just flown into Kennedy Airport from L.A. when he heard I had left for the show. He

Clement Perry

caught a red eye only hours later for another cross-country flight. The next day we met by the Alpha Core booth and we spent the next three days going 'round the show and comparing notes. It's really nice to go around a show with a friend, particularly one that isn't influenced easily. It was also nice that we were so often in agreement about room and equipment sonics. When a room sounded bad, we both agreed without reservation. But when a piece of gear sounded great, we also quickly acknowledged this, too. Strange to be in such agreement, but I will not deny that kid's got great taste.

So, here is a tease of some of the best sounds at the show, with apologies to the rooms and firms where the camera didn't do its thing. Get 'cha next time.



VK-D5 tube CD player (\$4,500), a system that took digitally sourced music to new heights. Their two analog systems were no slouches either, featuring a Basis 2500, Graham Model 2, and Benz Ruby 2 in one, and a Basis 2001, Graham Model 1.5t/c, and Benz MO.9 in the other. That beautiful

To the B.A.T. cave, Robin! That is, the Music Lover's Room, where I was sandwiched between Albert Von Schweikert of Von Schweikert Research, and Victor Khomenko of Balanced Audio Technology. Trade secrets were shared with me that couldn't have been more on the money. The ingenious room setup with proper room treatment (Echo Busters) garnered Second Best Sound at the Show! The new VR-6 loudspeakers (\$12,000) were paired with the B.A.T. VK-200 amplifier (\$3,500), VK-3i preamp (\$2,500 remote included), and the soon-to-be-released

turntable, arm and cartridge make up the new model 2800, which features the integral arm-board, fluid-damped suspension and reduced footprint of the 2001 model combined with the proven high-mass platter, precision bearing and vacuum clamping system of the Basis Debut Gold Vacuum turntable (\$10,600). Owners of Basis 2000 and 2001 turntables can upgrade to the 2800 for simply the price difference between the models. Basis tables, Graham arms, and Benz cartridges, distributed by Musical Surroundings, were much in evidence at various Show rooms.



Here are Luke Manley and Peter McGrath in the Audible Difference room which was populated with equipment from Eggleston Speaker Works, VTL, Levinson, Nagra, Z-Systems, and Transparent. It all went to show that it is possible to demonstrate four-channel music properly. The new product that I found most remarkable was the Z-Systems RDP-1 digital equalizer (\$5,000); it really changed the sound in that room for the better. Z-Systems has a reputation in the pro ranks and says equalization, done right, is marvelous; after hearing their demo, I agree. This RDP-1 unit is out of this world in its capabilities, and it finally gives back something to audiophiles I thought I would never see, absolute control over the entire audio band. The RDP-1 operates totally in the digital domain between transport and D/AC.



MBL of America really gave a fantastic demonstration, despite being in a small room. Indeed, they had some of the best sound I ever heard in a room so small.



Must be those omni-directional tweeters in the MBL-111 (\$13,900) which, I believe, are the best tweeters money can buy. Chief designer Jurgen Ries not only designed their flagship MBL-

101D omni-directional loudspeakers (\$35,000), but is also responsible for the creation the largest amplifiers I've ever seen, the MBL 9010 (\$19,790 each), which really kick the tar out of those speakers and manage to stay sweet, too. These behemoth mono blocks actually look better suited for a location under the hood of some race car!





So what else is new? Best sound at the show was the Wilson Audio X1 Mk 2 speaker system (\$75,000) driven by the new Krell FBP 600 amp (\$12,500) and the Audio Research Reference One preamp (\$8,500). All cabling was compliments of Transparent. The system's sound was just overwhelming for the common Joe, and of course will overwhelm his wallet, too. I personally felt, as did Chin, that the best sound was, in fact, coming from the Von Schweikert and B.A.T. setup. But, Dude, before you wonder why these guys got the "Top Sound at Show" rating, let me explain that it's not my responsibility, since that comes from a vote by those attending, not just Chin and me. And, no, I don't find it strange because I, too, liked their sound immensely well.



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ECORDING OF THE MONTH



Jazz

Diana Krall
Love Scenes

Impulse
IMPD-233

Mark Block

Not so ironically—seeing as how her “break-through” album, *All For You*, was a tribute to Nat King Cole—Krall may turn out to be the female Nat Cole of the nineties, a serious jazz pianist turned top-forty pop singer. Her relative youth, good looks, and blond hair endow her with a natural, media-friendly commercial potential; unfortunately, the ability to breathe new life into an Irving Berlin standard is just not a talent many people care about, show business being a “no” business for jazz singers these days. But Krall’s talent is, at this point, beyond question. Excellent instrumentalist, superb vocalist, tasteful song stylist: Krall combines a serious intelligence with a sensibility broad enough to encompass pop. It’s a potent mix.

The one thing that could turn the Krall starship into a Mir meltdown is the lack of showmanship. Her persona needs the intimacy of a camera, a recording studio, or a small club to “play.” Friends of mine saw her in a big concert hall in Montreal and were disappointed. I saw her do the same act a few weeks later at the AlgonquinHotel’s Oak Room in New York City and was mesmerized (until slapped with a hundred dollar tab for an hour’s worth of two seats at a packed table with a cup of coffee on the side). Unlike Harry Connick, Jr.—the would-be Frank Sinatra of the nineties—she can’t razzle-dazzle a large crowd.

For the true music lover, however, it’s a small price to pay. If you want to see a chick singer put on a show, go see Holly Cole. If you want to hear real musicianship, Krall’s your woman. Part of Krall’s uniqueness is the ability to remain cool and minimal without losing the catchy hooks of pop or the swinging embellishments of jazz. If she played

At first blush, the title of Diana Krall’s eagerly anticipated new album is a straightforward attempt to find a common theme in a very eclectic selection of songs. (A little Gershwin and Berlin here, a bit of Percy Mayfield and David Frishberg there, some Peggy Lee and Luis Bonfá in between.) I detect, however, an unintended double entendre: The album title is a shrewd prediction of where her career *could* be headed: TV, Hollywood and pop crossover stardom. Looking at the album art—at the gauzy, moviestar lighting and sexy poses—a funny alter-image starts to come into focus: Big dollar signs in the eyes of Krall’s agent.

One song here, “Peel Me a Grape,” made it onto the soundtrack of an upcoming Danny DeVito/Holly Hunter “romantic comedy,” *The Kiss*. And by the time you read this, Krall will have made her debut on *Melrose Place*. Not that there’s anything wrong with it! *Melrose Place* will survive the momentary lapse into good taste, and given Krall’s musical skills, her career is on a do-no-wrong rocket right now.

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to the back rows, she'd lose her true audience up front.

Krall strikes me as too fundamentally genuine to be a phony, show-bizzy crowd-pleaser (to both her credit and detriment). Growing up in Nanaimo, British Columbia, she supposedly had a Peter Frampton poster over her bed, received classical piano

training at the age of four, and joined in frequent, informal song sessions with parents and siblings around the family piano. The radio and record player were a constant presence in the house. Influences range from Fats Waller to Sting. Having assimilated so much, Krall is wise enough to know that she

still has a more to learn; her artistic options are vast, but one option—faking it—is impossible.

Krall's hometown, by the way, is renowned in western Canada for its Nanaimo barno—not an adult watering hole, but a gooey, brownie-like concoction. As a sticky-sweet dessert for children, it is to food the opposite of what Krall is to music. On the other hand, *Love Scenes* could definitely be considered a rich treat for the ears.

Many of the love songs Krall has chosen here (with help from producer Tommy LiPuma) have a personal meaning for her. She found Luis Bonfa's "Gentle Rain"—the most surprising, profound and moving song on the album—in her father's sheet-music collection. Krall's haunting interpretation has been playing in my head for weeks, but I can't for the life of me hum the tune. It's too elusive, too ephemeral, too subtle. Krall gives meaning to the words and shape to the melody in a way that's beyond my capacity to analyze but well within my capacity to appreciate and enjoy.

Blossom Dearie's recording of "Peel Me a Grape" was a personal favorite of Diana and her sister, and here she makes the song's haughty demands seem ever so resolute and purposeful—without losing track of David Frishberg's witty, gentle campiness. Adding weight and seriousness while preserving a song's other values seems to be a Krall trademark. The first cut here, "All or Nothing at All," is another example of Krall's finding the underlying gravity in a lyric while maintaining a tongue in cheek-to-cheek good humor.

Whether sounding playful on Peggy Lee's "I Don't Know Enough about You," dreamy on



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"They Can't Take That Away from Me" or sexy on "How Deep is the Ocean (How High is the Sky)," Krall always manages to go beyond the obvious, communicating emotions that are complex and multi-layered.

"Ghost of a Chance" and "You're Getting to be a Habit with Me" are two other long-time Krall favorites included on *Love Scenes*, but I think it's a bad "Habit," perhaps the only clinker on the album. It's the one number where you may say, "Did we really need another recording of that?"

Christian McBride on bass and Russell Malone on guitar once again form the backbone of the Krall trio. No percussion this time—McBride's bass and Krall's singing provide all the rhythmic drive anyone could want, and Malone is a formidable guitarist, with several excellent solo albums to his credit. Krall fans should check out his

first effort, *Russell Malone* (Sony 7464 52825) with guest artists Milt Hinton on bass and Harry Connick, Jr. handling vocals.

LiPuma keeps the sound clean and close up, pretty much like his previous work on *All For You*. Why mess with success? Purists won't appreciate it: The live, seemingly unmiked magic of a Chesky production is missing. The recording is well-balanced, however, and full of nuance and detail. Piano pedal creaks, licking of lips, soft breaths and, more importantly, subtle vocal inflections are all there in abundance, which makes *Love Scenes* a particular pleasure on a high-end system. Krall is not a belter—her performance depends on intimacy—so the production approach here is probably the right choice.

The one engineering choice I would seriously question is the placement of instruments on the soundstage. The guitar and bass

are lumped in the middle with the voice. If it weren't for the overly wide piano and added reverb, the recording would be essentially mono. Why not place the guitar slightly to the left and the bass a little to the right the way they'd typically be heard in concert? It's so simple, and the "live" illusion would be improved tremendously.

By the way, LiPuma and engineer Al Schmidt add an almost subliminal hiss (of a soft drizzle?) on "Gentle Rain," which you won't hear in your car or on a mediocre hi-fi. Play this cut on a quiet night without distractions. As Krall sings, "Walk with me in the gentle rain . . . Come little one, you have me in the world," you will involuntarily close your eyes and be transported to a misty landscape somewhere near Nanaimo, B.C. And you will feel something a little sad but mostly sweet. And you will be moved deeply.

X

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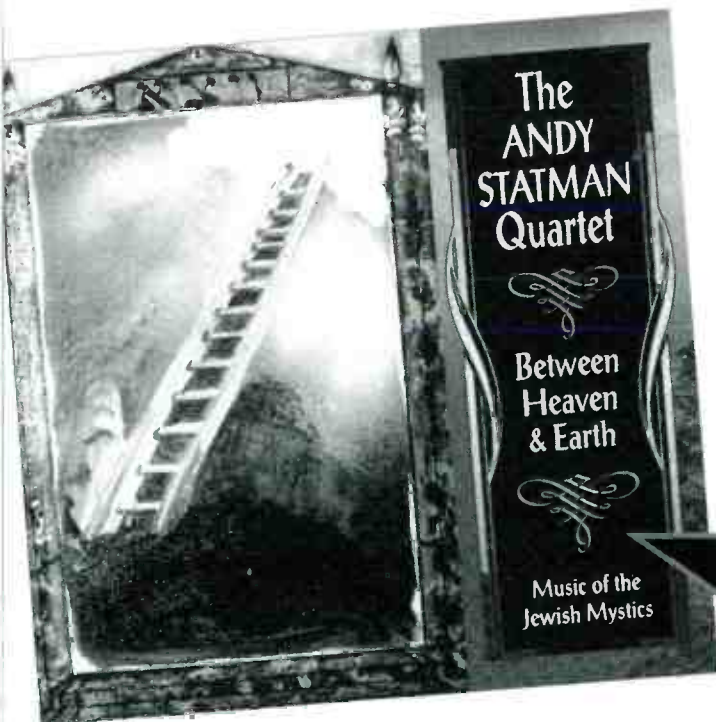
Carla Bley Big Band
Goes to Church

Watt 27

I have mostly had the jazz history beat here at TAV, covering either reissues of jazz classics or new recordings of older artists (this is, of course, what most audiophiles care about, which of their 10 "Kind of Blue" copies has the most "air"). Here are two current CDs (at least when I began this review), to show what a *now* guy I really am (my wife is gently reminding me that jazz hasn't been "now" music since the '40s...).

These CDs present ecumenical music as refracted through a jazz prism, but tapping two very different traditions. Bley, who has previously recorded some gospel-sourced material, clearly knows and loves this music, though she keeps tongue ever so slightly in cheek (the CD booklet's front cover depicts angels playing music in a church, while the back cover features the musicians (no angels) being dragged into the church entrance). Statman, however, is a true believer, a Baal-Teshuvah (the Jewish equivalent of Born Again), and he walks the walk and talks the talk. This is palpable here.

Bley's album's opening piano chords are telling, leavening gospel harmonies with subtle, dark disso-



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nances. The themes are recycled ("Bringing in the Sheaves" with hints of "Old Rugged Cross") and developed (for nearly 24 minutes). A fine tenor solo by Andy Sheppard is followed by an edgy, Salvation Army-style brass interlude, then Lew Soloff shines in a trumpet solo. The band stops on a dime, and Bley has more arranging tricks than Dennis Rodman has hair colors. They don't sound gratuitous, however, and she maintains interest during this long piece by varying textures, tempos, dynamics, and

reharmonizing themes (with judiciously applied dissonances). The piece goes on to feature stop-time, an unaccompanied sax chorus, a piano/glass harmonica duet, blaring big band sections, and a mess of fine solos. While on paper, this may seem overly busy and possibly pedantic, it's powerful, exuberant, involving and fun listening.

"Exhaltation/Religious Experience/Major" starts with a hymn played on organ, reharmonized and repeated by brass choir, then segues to free-time solos framed by Hallelujah Chorus-like outbursts (reminds me of the Charlie Haden Liberation Orchestra but with a sense of humor). "Major" juggles three time signatures, rocking rhythms, and a reggae-tinged "verse," wild blowing, and an explosive ending (like Jelly Roll Morton's arrangements in the '20s, all this variation, rather than calling attention to itself,

adds momentum). "One Way" and "Permanent Wave" are ballads (though both have uptempo sections), while "Beads" comes closest to jazz feeling. The closer, "Who Will Rescue You?," starts out with testifying trombone (Gary Valente) and an aching melody, then rocks out, trombone and alto (Wolfgang Puschnig sounding Arthur Blythe-ish) preaching and responding. They solo over the

most
charging,
stomping
church
back-
beat,
which
always
gets me
up on
my feet,
shouting

**These CDs offer
eccumenical music
refocused through a jazz
prism, but still tap two
very different traditions.**

"Amen, brother." A bravura performance.

This is a fine-sounding disc. Instruments are spread across a wide stage, with good depth and sense of the original event, a live concert in Italy (where better to preach the gospel?). Trumpets have bite, trombones growl, saxes have body, and everyone is easily located on this stage.

Bley is truly interested in but not of this music. While this disc packs a wollop, its raison d'être is Bley's composing and arranging. The epiphany sought (successfully) is musical rather than spiritual; Statman, however, is after them both. The CD booklet makes fascinating reading, tracing origins of these Chassidic nigunim (melodies) and their functions in Chassidic life, and telling stories of and quotes from the rabbis, never proselytizing, only teaching. (As a fallen yeshiva student, my alarms go off at any hint of preaching). A quote will illustrate: "Words are the

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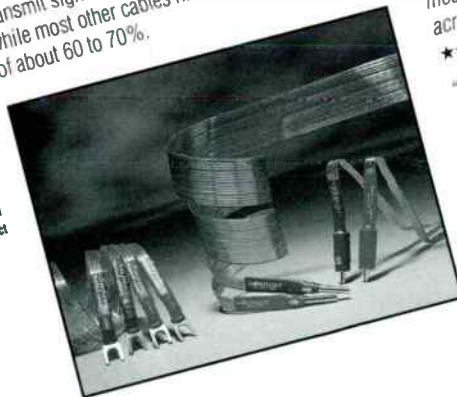
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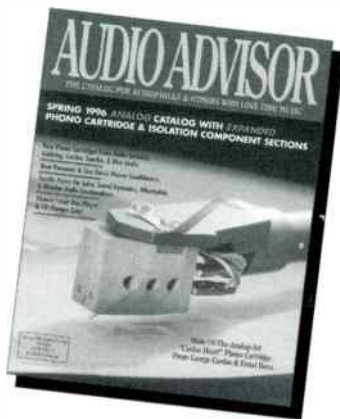
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pen of the heart, but music is the pen of the soul" (Rabbi Zalman of Liad).

Statman has been a musical chameleon over the years, starting off as a Bluegrass mandolinist, then developing an interest in jazz and world music (earning the title "the Thelonius Monk of the mandolin," though John Coltrane and Albert Ayler were his primary interests). He then immersed himself in Klezmer, studying clarinet with master Dave Tarras, and until this CD has played it fairly straight. Here, he melds Chassidic music with jazz arrangements and improvisation; think of `Trane's "Spiritual" or "Alabama."

The first track, "Maggid," drapes a lush, lovely melody over accompaniment that crosses a Doyna (an Eastern European modal style) with that `Tranish groove. This `Trane/Ayler feel is not in Statman's solos (with their Klezmer-derived melodic style), but in the arrangements, with polyrhythmic interactions, drums playing against and around the time, and the solo suspended in a free-time/rubato feel. Intensity and spirituality are also `Trane (late period, Ayler derived, where running the changes is secondary to connecting with the divine spirit). Statman's style is very un-jazzy; his tone veers from rich and schmaltzy to pinched, and the flutters, bends, and quavers are out of this folk tradition. The second track, "You Were Revealed," has a rather similar arranging, a fine piano solo by Kenny Werner, then one of Statman's most probing, jazzy improvis.

"Adir," up next, is a breathtakingly beautiful, drumless ballad. Bela Fleck guests on banjo on two tunes. "Chassidic Waltz"

blends the Mid-East, jazz, and bluegrass seamlessly, Fleck playing with virtuosity and sensitivity (the latter, I find, is in short supply on his own outings). On "Purim," he does duets with Statman, camping and providing counterpoint while Statman wails—the shtetl goes to a hoe-down.

The piano-clarinet duet "Yonah" is so achingly gorgeous you want to cry. "Reb Nachman's Deveykus Niggun" is another modal vehicle for Statman's probing playing. "Tzumah Nafshi" is, dare I say it, sweet, sad, and lovely (this CD packs more lovely melodies per pit than any in recent memory), and is played quite straight forwardly.

Ending the CD, "If Not For Your Torah," has David Grisman guesting on mandolin (Statman dusts off his as well), and the two caress the melody, harmonizing seamlessly (these two have collaborated before, and it shows). They both solo (I think David Grisman is first, then Statman, who still plays phenomenally), then wrap up with a shimmering statement of melody (separating the mandolin lines is a good test of a system's resolving power, for those so inclined).

Sonics are excellent. This was recorded live in the studio, and is an audiophile's delight. Instruments are surrounded by air; timbre and instrumental tonality are full (clarinet, mandolin, and banjo have rich, distinct tonal signatures, clearly rendered). Overall, the imaging and the sound of the studio are first-rate.

I'll now offer thanks to those who give us our daily tunes, and call for Hallelujahs and Amens to both these heavenly offerings. See you at services.

THE END OF THE ICE AGE.

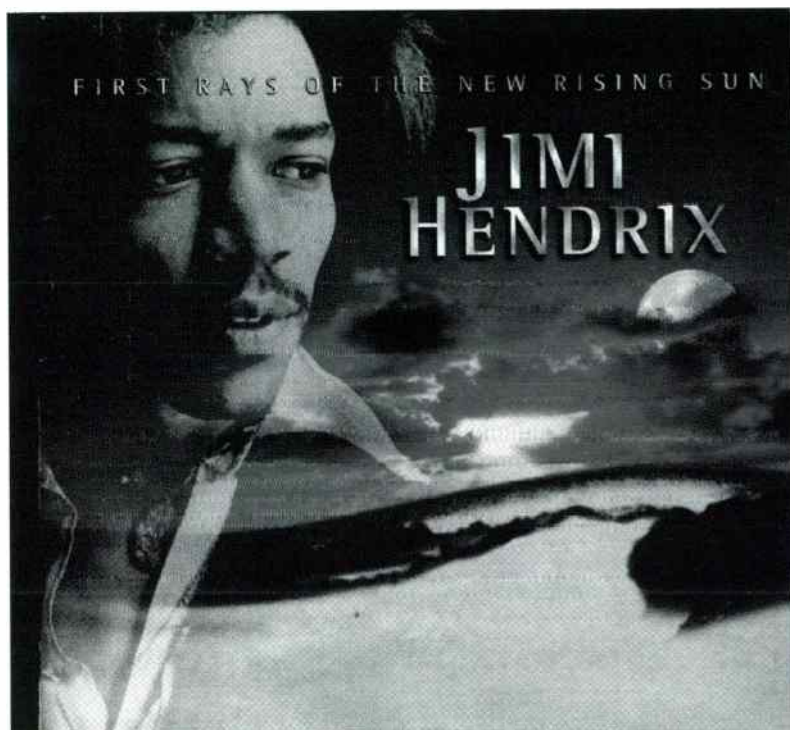


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Classic rock is a strange phenomenon. Who would have guessed that music created in the spirit of "That Which Is Immediate" would ever be treated as something as trite as "classic," but perhaps Jimi Hendrix is the Mozart of the 20th Century and his works will inspire for centuries to come. The fact that *First Rays Of The New Rising Sun* (essentially a re-release of

The Cry of Love, Hendrix's first posthumous release) can rocket to the top of the charts as if it was a brand-new record by a hot group speaks volumes about its timelessness.

New Rising Sun marks the end of the era of Alan Douglass lording over the posthumous releases of one of the greatest artists of the rock era, Jimi Hendrix. Hendrix's sister has

joined forces with Eddie Kramer (engineer/producer) to control Hendrix's legacy, and the initial new release from this new agreement is *First Rays of the New Rising Sun*. While *First Rays* has been heralded as the "Great Lost Jimi Hendrix Album" he was working on at the time of his death, it is more accurate to say that it is a revised version of *Cry of Love*. Certainly, there are several extra tracks culled from *War Heroes* and *Rainbow Bridge* to augment the 10 songs from *Cry of Love*, but there are no major revelations here, nothing that hasn't been issued previously on vinyl. Nonetheless, it is an excellent album, and because there is a good deal more material here than on the original *Cry of Love*, one can very easily call this CD a big improvement upon the original.

Unlike *Voodoo Soup*, which made its appearance two years ago with a similar ballyhoo as "the last works of JMH," there is no unauthorized recording on *Sun*. All of the overdubs were supervised by at least two of the

plenty of heat, though some of the selections could have benefited from additional guitar work from the late idol.

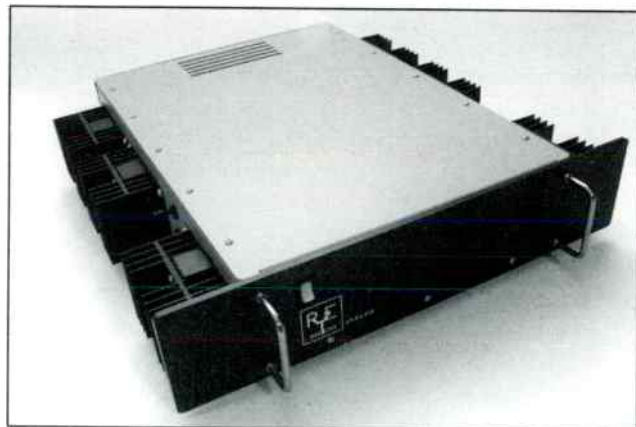
At the same time, this new agreement with the Hendrix Estate has allowed MCA to reissue the original three Jimi Hendrix Experience albums (*Are You Experienced*, *Axis: Bold As Love*, and *Electric Ladyland*) from the original master tapes. I don't know how many generations down the tapes they were using before were, but these new editions

**These new editions of
Hendrix classics
seem to have
a lot more definition,
particularly at the low end.**

three producers (Jimi Hendrix, Eddie Kramer, and Mitch Mitchell), and all of the recordings and mixes date back to the early Seventies. These are among Jimi Hendrix's best songs—"Ezy Ryder," "Angel," and "Straight Ahead" paved the way for rock's expanding directions—and they still generate

seem to have a lot more definition, particularly in the low end.

Now, can we have some new stuff? The jams, the outtakes, the demos, and all the stuff that the bootleggers have had for years would be a nice start. I am assured that they are on their way, but the sooner the better is what I say!



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Guaranteed to be like nothing you've ever listened to, Margaret Leng Tan is quite serious about her program of music performed on toy pianos made by Schoenhut and Jaymar, the Steinway and Baldwin of toy pianos. Clearly, this program arises from the attention gained by her recording and 1993 live performance of John Cage's "Suite for Toy Piano."

The new album is a varied work that can be absolutely charming at times and equally irritating at others. One selection is particularly apt as an introduction to the possibilities of the toy piano, a bold and arrestingly adorable arrangement of "Eleanor Rigby."

There are four selections written specifically for Tan, and one

of these, Stephan Montague's "Mirabella (a Tarentella)," opens the set with a dazzling display of the potential of the instrument, as Tan must execute it with both precision and velocity. Toby Twining contributes a pair of piano/toy piano duets in "Satie Blues," a slow and reflective piece, and "Nightmare Rag," which is at once jaunty and unsettling. Julia Wolfe's "East Broadway" seeks to capture the sounds of the East Village as it contrasts the sound of the toy piano with an electronic rhythm track played through a toy boombox.

The most phantastic piece is Raphael Hostel's "Star-Spangled Etude #3" ("Furling Banner"), a variation of the National Anthem with the toy piano aug-

mented by toy siren, police whistle, and cap guns.

Over the course of the album, the toy piano's sound, with its brittle timbre and limited range, can wear its welcome pretty thin, even though Tan does things with it, time after time, that nobody else would have even dreamed of.

In her notes she sums up her fascination as she writes, "I remain wholeheartedly intrigued by the toy piano's magical overtones, hypnotic charm, and not least, its off-key poignancy."

And I might add a healthy dose of whimsy which is perhaps best noted in her dedication of the Beethoven "Moonlight" Sonata to Schroeder, the toy piano wizard of the comic strip "Peanuts."

R E C O R D I N G S

The Buxtehude Project Volume II: Harpsichord Music

Pro Gloria Musicae PGN 105/Vol. 2

Gavin Black, Harpsichordist

Arthur Paxton

While cruising your favorite CD haven for mind-bending, ear-provoking sounds, do you casually disregard the Buxtehude bin? Don't.

They say that a drenching shower makes the garden grow, and a double-edged sword can be used against you. A bull market will give way to a bear...they say. In music, this weighing of compromise, risk and benefit is largely a lost concern. Of course, a recording engineer's lot is to juggle tradeoffs, and the audiophile always faces the risk of giving in and squandering the children's college savings on the ultimate system. But in making music there is a very fundamental tradeoff we have come to take for granted. In Buxtehude's day a virtuoso keyboard player reckoned with audible musical risks every time he approached a sturdy instrument, beautifully tuned, particularly if beautifully tuned.

In embracing that feat of German engineering, equal temperament, we have accepted a profound compromise for the convenience of being able to play in any key. With equal temperament, each half step of the keyboard is made the same size, allowing all intervals to be quite well in tune, but not perfectly so. In his

Well Tempered Clavier Bach revealed in the compositional freedom and range allowed by the newly emerging tuning system. With equal temperament now long the norm, however, we miss basic intervals such as fifths and thirds tuned perfectly to the harmonic series. A force of nature as immutable as gravity, the harmonic series involves the hierarchy of tones (harmonics or partials) generated by any musical sound (or fundamental). The older mean tuning of Buxtehude's day allowed important notes of the tonic (home key) to be tuned pure, and to sound with a plummy rightness, at the expense of tones distantly related to the tonic.

A harpsichord, tuned and played with historical authenticity, can be startling to modern ears.

For his tour of Dieterich Buxtehude's harpsichord music, Gavin Black plays an instrument by Tyre & Goudzwaard, made with historical authenticity and extraordinary attention to

detail. Modeled on mid 17th-century Flemish instruments made by the Ruckers brothers, it is a double-manual instrument with a short-octave upper and chromatic lower keyboard. In addition, this instrument has two non-coupling eight-foot

stops and two four-foot (octave) stops, permitting a greater variety of sound colors than a typical 18th-century design. These recordings are apparently the first on such a harpsichord. Many recorded harpsichords sound very bright, even jangly. Wonderfully pungent and complex, this instrument's voice is quite mellow, possibly due to the heavy, low-carbon content iron wire strings, and bird quill plectra used throughout. Significantly, a quarter-comma meantone temperament (the most common keyboard tuning of the mid-17th century) was used. This allows for eight major 3rds to be tuned pure, but for four to be tuned so wide as to create discomfort to the listener and to encourage avoidance by the composer.

Neither as fiery as Scarlatti's sonatas or as virtuosic as Bach's keyboard works, the three suites are richly textured and quite varied in rhythm. Avoiding theatrics, they strike a balance between contrapuntal rigor and the emotional expressiveness associated with dances (however stylized) on which the suites are based. This music avoids hyper-expressive High-Baroque intervals like the diminished

7th which permeates Bach's music; indeed Buxtehude's music often recalls the amiable modal harmonies of the English Elizabethan composers. As these pieces remain close to their home key, the mean-temperament seems to impart a kind of bucolic groundedness.

With the variations on the drinking song, *More Palatino*, one occasionally senses the lines and harmonies are being gently unmoored. With the 12th variation on *La Capricciosa*, the music is wrenched into uncharted seas. Suddenly quite chromatic, the melody reaches outside the pool of sweetly-tuned notes, and the listener finds himself in a kind of intonational Bermuda Triangle,

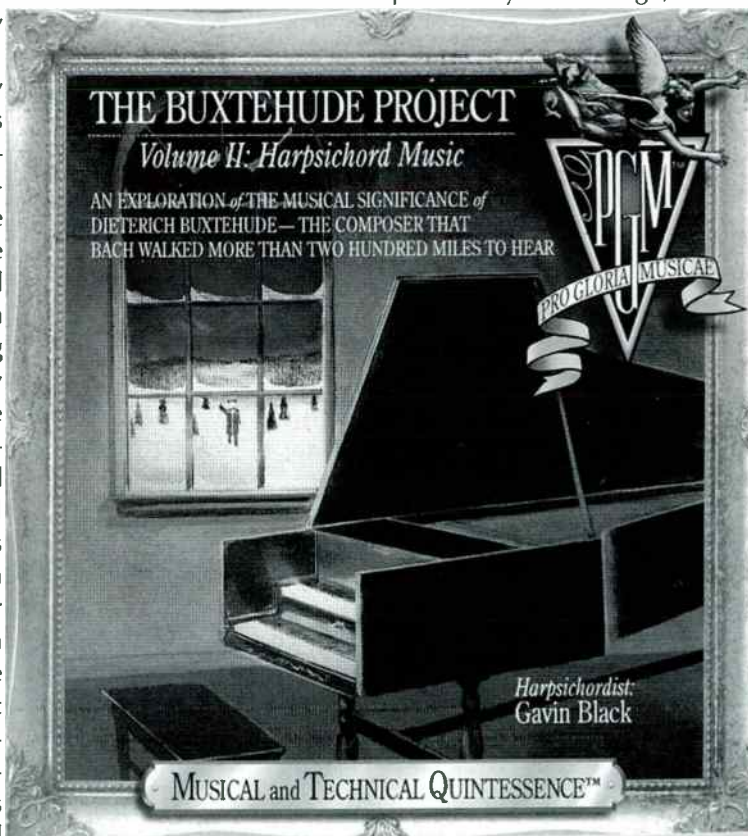
swimming with sharks. That sinking feeling comes from the use of ill-tuned intervals normally avoided, a vivid contrast to the rest of this piece (very likely a direct model for Bach's *Goldberg Variations*) which is comfortingly cheerful and direct.

Gavin Black's playing is supple, but never mannered. *Gigues* have gusto, while *Sarabandes*, often deeply expressive, move with an eloquent ebb and flow. With natural warmth and clarity, Gabe Wiener's recording captures all the colors and quirks of this unique instrument. I almost called it a "beast" for this Buxtehude harpsichord has the personality of a benign, but subtly unpredictable,

living, breathing creature. The booklet is richly detailed and quite readable. Notes on the composer (due to lack of information on Buxtehude) tend to center on Bach's 240-mile journey by foot to hear the 70-year-old master, and his subsequent declining of a job offered with the proviso that he marry Buxtehude's 28-year-old daughter. This project, through its artistry and care, helps to humanize a composer too often

envisioned as a fixture of some drafty Lutheran organ-loft.

Back in the mid sixties when I first heard an "original instruments" performance on LP, the intonation often lapsed as musicians struggled with their strange, temperamental instruments. Now in the ripe days of the CD era, the situation has come full circle as sophisticated musicians play with intentional, indeed systematic, shades of out-of-tuneness. I have heard a number of performances (both live and recorded) involving a mean-tuned keyboard instrument, but never to such thought provoking effect as with this fine disc.



Les Berkley



Classical

J.S. Bach: St. John Passion, BWV 245
 Trinity Cathedral Choir and Brooque Orchestra
 Eric Milnes, Director
 Pro Gloria Musicae PGM 111

We are being told, at least by most of the mass media, that something is killing classical music. Some blame the greed of musicians, orchestra management or major record labels; others point to the repetition of standard repertoire or the inaccessibility of contemporary works as the cause of public indifference. Although there are plenty of strawmen being set up, there is nevertheless a good deal of truth in these arguments. I expect to comment in future on some of these issues, but for the moment I would like (contrary

to my basic nature) to sound a tiny note of hope for the longevity of this art form..

In popular music, the "indie" phenomenon is already well-established, and now the same thing appears to be happening in the classical field. This sparkling two-CD set of Bach's St. John Passion is one example of a new and genuinely exciting trend. There are no famous names here (although soprano Tamara Crout Matthews will be one soon, mark my words), nor are there Three Tenors, nor Three of anything in particular.

Even the work itself is not one of Johann Sebastian's better-known efforts, being (justly) overshadowed by the richer St. Matthew Passion. What we have on this disc, instead of "name" artists, in over-recorded repertoire, are truly felt passion and a strong commitment to music and recorded performance.

Eric Milnes directs the choir and Baroque Orchestra of Trinity Cathedral, Portland, in a live performance recorded in a large and suitably reverberant acoustic. It is not a perfect performance, but it is musically

alive and entirely respectful of period style. The Trinity choir sings eloquently and forcefully, with as good diction as some native German groups I've heard. It also says something for the strength of Baroque music in the United States that Milnes was able to employ soloists that are as excellent as those recorded here.

I have to single out Tamara Matthews, who as I have said, is going places, but there are, in fact, no weak links. This goes for the instrumentalists as well, although it must be pointed out that the St. John Passion does not involve the sort of demanding instrumental writing contained in many of Bach's later works. I did very much enjoy Mike Willens's solo gamba work on "*Es ist vollbracht*"; Bach was one of the last to write for fretted viols, and

he often (as here) displayed his quite considerable powers of invention in so doing.

This brings us to a discussion of sound quality. Audiophiles love to discuss digital vs. analog and other controversial subjects; what is sometimes left out of

Tom Swift and his Electric Bowling Ball, the Schoeps in Wiener's hands produces a realistic soundstage perspective and startlingly natural timbre. The St. John recording also employs a "helper" pair of hypercardioids over the chorus to provide additional detail in voices, while not obscuring the soundstage produced by the main mike. This results, perhaps, in a slight emphasis on the sibilance, but it does render the choir in a more accurate light otherwise.

This is, in sum, a lively performance with a quite exemplary sound. I was looking for the fine sonics, having heard and reviewed several other PGM discs, but I would feel comfortable recommending this disc for the quality of its performances alone.

And remember, you heard Tamara Matthews' name here first!

**Remember Tamara
Matthews; you will hear
her name again, and she
will be famous.**

these arguments is the essential fact that, without proper choice of microphones and placement, neither 30 ips analog nor 24X96 digital can produce anything like a completely realistic representation of the original event. PGM's Gabe Wiener and David Oliver use the Schoeps Sphere as their main mike array. Despite looking like a prop from

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RECORDINGS

Roger Oyster

Classical



Stravinsky: *Petrushka*;
Ansermet, Orch. De La Suisse Romande
Classic Compact/London CSCD 6009
Tchaikovsky: *1812 Overture*, *Capriccio Italien*, *March Slav*;
Alwyn, London Symphony
Classic Compact/London CSCD 6038



This was my first experience with the Classic Compact Disc folks, and my first reactions to the two remastered reissues listed above were largely skeptical. First of all, the original LP cover art was reproduced for the front and back of both CDs. The original designs were probably camp back when the LPs were issued and time hasn't improved them. The timings on the tracks were strangely left out, too. "Gosh," I thought, "I wonder why. Could it be, I don't know, because 45 minutes of music on a CD is, well, stingy?" Actually, it's dangerously close to "cheap" and a stones throw from "rip-off." Weren't there some other quality performances in the archives to fill out these discs? And as a working musician, I must admit I also have some problems with the whole re-release concept. This business has the lousy rap of being dominated by music written by dead guys. Now we have music written by dead guys performed by other dead guys. The cynic in me wonders if remastering older discs is more cost effective than

paying modern recording rates. Naw, that can't be it, but can it? It does make me wonder, however: what are today's orchestras and conductors bringing to this "top 100" repertoire?

All this, mind you, was before I had listened to either of them. Lots changed after I did.

The *Petrushka* recording is a fine performance filled with energy and whimsy. There are two general categories of orchestra music in my opinion – actually music in general. The first category is pieces that have trouble standing up on their own. They need the infusion of creativity and energy from the performer(s) to bring them off. The other category, a much smaller percentage, is music that is so good that the challenge to the conductor and musicians is to live up to the notes on the page. *Petrushka*

is in that category and, provided they can conduct through the meter changes, is practically conductor-proof.

Even though this piece is inherently terrific, this particular performance has sparkle. The recording sounds great, aside from some funky brass playing (the excellent sonics on the disc

Every audiophile should have nothing but praise for these remasters of classic recordings.

will allow you to experience the funky, wide-screen vibrato used by the tubist in the "bear" solo in all its weird glory). All in all, I'd be happy to add this performance to my collection.

The second CD was an even more pleasant surprise. The

pieces on the Tchaikovsky disc have acquired the stoop-shouldered quality of music that has been played past the point of becoming cliché.

"What...another *1812*?" I have discovered something though: works like *1812* and *Capriccio Italien* are well known for a good reason – they are just plain terrific. These are works that have passed the test of time with perfect papers. The highest praise I can give any recording is that while listening critically I suddenly got lost in the music. That's what happened here — when listening to *1812*, I stopped thinking about the rock-solid performance, the stirring interpretation of conductor Kenneth Alwyn, the band of the Grenadier Guards and the obligatory cannons at the end, and found myself swallowed up

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by the complete ecstasy of just triumph and the transcendent glory of righteous victory. Anyone that thinks classical music is boring and listless should be, clockwork-orange like, restrained, played this recording and...voila! Another season ticket holder!

The *Capriccio Italien* is also a delightful performance, with an interpretation that is right down the middle. *March Slav* is the weak sister of the other two pieces. It falls in the first of the two categories mentioned before—pieces that need to be courted and cajoled into semi-greatness. This performance is as good as it gets and even contains a few new wrinkles (or are they old wrinkles? Remastered wrinkles?). The final section that begins with timpani and clarinet duet is usually taken at moderate tempo, so when the low brass comes in with the *1812*

material, it's a direct quote from that piece. Mr. Alwyn takes it much faster and doesn't worry about the *1812* reference. It's different and I think it works.

I sent a fax away to Classic Compact Discs and received a phone call post-haste from Jimmy Edwards, their marketing director. The philosophy at CCD is to find noteworthy older recordings (the Stravinsky was recorded in '57, the Tchaikovsky in '58, and, by the way, how about including the original recording dates from now on?), acquire the original masters, and let loose their remastering guru Bernie Grundman and his 20-bit A to D converter on them. The company even brought over career London/Decca audio engineer Tony Hawkins to help recapture the original spirit of the recordings.

They are so devoted to the original that they intentionally

retained the cover art and notes. This explained the chincy amount of music on the disc; in order to be completely faithful to the original product, they remastered and reissued only the music on the original release. (Okay, I'll cut them some slack on this point—it's still less music than you expect on a CD.)

The quality of these remastered recordings is wonderful. The 20 bit "High Definition" A-to-D converter used has rendered CDs that I would not have known were remastered had I not seen the liner notes. All of you dyed-in-the-wool audiophile-or nuttin' types should have only praise. These recordings are really delightful and, if you can get over the less than generous amount of music on each CD, not to mention the cover art, I'd buy them if I were you.



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Balanced Audio Technology VK-60

Tube Monoblock Amplifiers



While some companies come and go, there are a few that come on the scene and then proceed to go, go, go! Balanced Audio Technology (BAT) certainly fits the latter category. I can't recall

Arnis Balgalvis

any other company that made their initial appearance with as much splash as BAT did at the '95 WCES and subsequently went on to display such remarkable growth within the industry. Both of

their debut products were of the tube persuasion and used balanced topology, of course: The VK-60, a 60-wpc power amplifier, and the VK-5 pre-amp. Today, their lineup spans both tube and solid-state designs and is approaching 10 models deep.

BAT was formed by two partners: Victor Khomenko, who is the designer of the products, and Steve Bednarski, who does the marketing. That they are committed, is obvious. Even though both of the principals started BAT out on a part-time basis, they now have quit their very desirable normal employment at an exalted company like Hewlett-Packard and have been pursuing the

BAT's VK-60 auto-bias system will allow you to forget about making this regular tune-up.

amplifier business on a full-time basis for some time now. Geoffrey Poor has recently joined the two other principles to add his skills as Director of Sales.

BAT products have done very well on the review scene, with high praise being doled out consistently by a number of publications. Just recently, in TAV's Vol. II, No. 5, our own Bill Wells found the VK-5 preamp very much to his liking. Since my predilection is for a lot of power (single-digit power ratings leave me cold), my ears perked up when Victor decided to configure the VK-60 stereo model into a 120-watt monoblock.

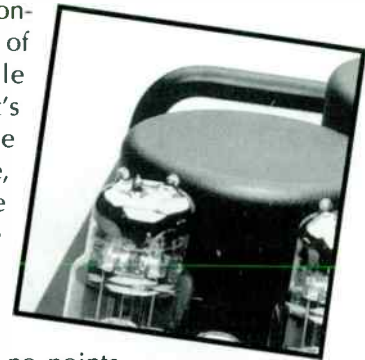
And what a beautiful sight two of these beauties make. First off, there are a couple of very useful ergonomic features that fall into our laps. For example, each monoblock comes with two inputs since both XLR input connectors of the stereo version are retained. Except that for the monos, they appear wired in parallel. This is very handy when you want to bi-amplify, since the need to search out Y-connectors is eliminated. All you do now is run your input cable for one channel into the input of first amplifier and, using a regular cable, daisy-chain the second amp to the other input of the first unit. On the output side, the two sets of output connectors used in the stereo version are also retained but wired in parallel, thus making bi-wiring ever so much more convenient. Instead of eliminating parts, they put them to good use. In my book, these are more than mere nice touches. It is also a confirmation of a thoughtful engineer-

ing approach. Which brings me to a recapitulation of some of the original features of the VK-60 that made this product so special and user friendly.

Once you get the BAT VK-60, you can forget about bias problems. Auto-bias is the name of the game and is confirmed by a green LED in front of each output tube and visible from the top of the chassis. If it's lit, the unit's biased. Should the LED not be lit, check the fuse, which is accessible from the corresponding opening in the bottom cover plate of the unit. These openings are a feature that I expected as minimum from BAT, so they really gain no points for that from me. Had they made the fuse accessible from the top, then I really would be doing cartwheels, though they do supply several fuses with each unit, just to be on the safe side. As for me, I had only a very rare occasions to change fuses, which were brought about by putting too many unreasonable demands on the output capability of the amp.

For those unfamiliar with the BAT VK-60, a summary of the main design features is included as a sidebar to this review. Basically, the BAT monoblock consists of wiring both 60-watt stereo channels of the VK-60 in parallel to produce a 120-watt mono-output amplifier. Being that the output is transformer-coupled, these 120 watts are available as long as the proper output taps are selected to match the nominal speaker impedance presented to the amplifier.

It should be of interest that no negative feedback is employed in the VK-60. Only plate-loaded triode circuitry appears throughout (that means there are no cathode followers), with nothing but



The only control is a power switch on the a.c. cord, and you need select only your speaker impedances.

custom oil-filled capacitors in the signal path, and the amps are fully compatible with single-ended preamplifiers. Even though only balanced inputs are available on certain BAT products, a set of adapters are provided for applications where single-ended preamps appear.

Single-ended triode fans should rejoice, since this is a single-ended output except that it is in a bridged configuration. According to BAT, this provides the best of the push-pull and the single-ended worlds. The output transformers are unique since they are toroidal, without an air gap, and use a low transformation ratio to produce a broadband design where the -3 dB points cover the range of 7 Hz to 70 kHz. Since each channel of the VK-60 uses a separate potted output transformer and the output windings are wired in parallel in the monos, the output impedance is cut in half in the monoblock configuration.

The set of monoblocks is very impressive physically.

No way they can go unnoticed. Each measures some 17 inches wide, 24 inches deep, and 8 inches high, so two of them take up quite a bit of floor-space, and the 85-lb. weight (per monoblock) demands careful consideration when positioning them anywhere above floor level. Three transformer modules sit in the rear of the chassis, while a total of 12 tubes occupy the front of it. Out of the 12 tubes, eight are 6SN7s and the other four are the physically imposing 6C33. It surely is a sight to behold when two of these monoblocks are aglow in full bloom, ready and able to do what they do best.

But as imposing as these BATs amps may appear, operating these beauties is a snap. The only control is an "on/off" power switch located on the rear of the chassis right next to the power cord. Distributed along the rest of the rear plate are two groups of four metal binding posts, which accommodate a wide variety of speaker impedances, with three ranges indicated on the back plate. As I mentioned, bi-wiring is most conveniently implemented. What is not obvious, however, is the added flexibility available to the user. In order to please the wide variety of user demands, it is now possible to separately match the woofer and mid and high frequency sections of loudspeakers to individual taps to provide the best results in the listener's environment. That means possibly running the bass and upper frequency speaker sections from different output taps.

Along with the power switch on the rear of the unit, there is another fuse in the a.c. line circuit, as well as a power-on indicator, a blue LED, in the center of the front chassis plate. Positioned slightly below the top chassis plate, and directly in front of the corresponding output tube, are four bias indicator LEDs. They are intended to be viewed from the top of the amp to make sure the bias is on. That's it, a plug-and-play design in the true sense.

I really enjoyed the convenience of having the auto-bias feature. Remember, this circuit not only keeps the tubes biased optimally during playback, but also while the amp is going through the initial warming up period. Not having to wait for the bias to settle in brings this amp up to speed that much more quickly. It's soothing for our impatient moods, and it is good for the tubes since listening can commence while still warming up.

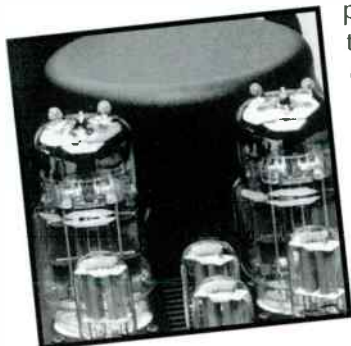
Please note that a VK-60 can be easily converted to a monoblock and vice versa. One can start out with a standard stereo VK-60 and then later do the conversion and add another amplifier to double up on the power in each channel. As I mentioned, this is an all-triode design, and since the BAT principals are confirmed believers in the balanced approach, the design is fully differential from input to output.

Of course, issues other than mere faith are important when it comes to deciding on the balanced topology approach. Let's face it, in our world of e.m.i. and r.f.i., decent hi-fi is seriously compromised without a balanced approach. It's not a matter of a higher parts count nor an alleged increase in circuit complexity. It has to do with the fact that a balanced circuit responds to a dif-

Switching between higher power mono output and standard stereo operation is easy to accomplish.

ferential input. Or, an output will result only if the two input terminals are at a different potential with respect to the other.

A single-ended signal responds to a difference between the input terminal and ground. In a differential circuit, interference will affect both inputs equally and therefore will not result in a change in the output, while the same interference will affect the output of a single-ended circuit since the input responds to a change in potential with respect to ground. Even worse things happen when the ground is contaminated in a single-ended circuit because the reference point is now shifting and that appears to the circuit as a change of input potential. A properly executed differential circuit



rejects signals that appear simultaneously at each of the two input terminals, and this ability been quantified into a well-known parameter for measuring the circuit's ability to ignore non-differential signals. It's called the common mode rejection ratio or CMR.

BAT's marvelous midrange presents a harmonic richness that is nothing but spectacular.

One often hears the argument for using differential circuitry only when long cables are involved but it is not applicable. Today's rampant contamination sources are pervasive, and differential circuitry is bound to help in our goal of keeping all of the frail musicality in the signal intact. However, like anything else, differential topology is not a boon unless it is properly implemented.

LISTENING

Once you have inserted the tubes, it's plug and play. Plug in the a.c. power cord and play the music. And does it ever play the music, and the tunes and the rhythms and the melodies! This BAT proceeded to deliver delicately delineated harmonic riches and unraveled musical complexities with an unusual deftness and finesse. However different the backgrounds of the three partners may be, their products do speak the one common language we all love and understand . . . and that's music!

As hard as it may be for some of you to understand, I have an on-going love-hate relationship with tubes.

However, the B A T monoblocks have placed me currently a long way over on the love side, making me forget my misgivings of the tube situation.

In short, my hesitations had to do with truncated as well as muddled bass response and an abbreviated high-frequency extension. The BAT monoblocks practically alleviate all of my

reservations, more so in the upper reaches than in the lower regions.

If you are miffed at me for not succumbing unconditionally to the charms of the BAT monos, then you are living in a world of illusions. The real world is far from perfect, and within that context, the BATs are doing great. Were these amps the answers to all my prayers, then Victor, Steve, and Geoff would be filthy rich by now and world famous to boot.

What the BAT monos do, however, is to tighten up the bass considerably and render a high frequency response that is nothing short of fabulous. The final result is a spectral response that is balanced and musically satisfying. Within the context of reproduced music, these amplifiers do an outstanding job.

As expected, the BAT's marvelous midrange always presents itself with very little room for criticism. The harmonic richness is nothing but spectacular. Violas, cellos and bassoons are rendered stunningly captivating, keeping the listener enraptured for hours on end. It matters not whether strings are bowed or plucked, appear en masse or solo, the ability of the BAT monos to resolve and reveal delicate details is absolutely stunning. I simply find myself playing much more classical music, small and large scale, far more often with the BATs in the system than I can recall doing in previous auditions.

All my previous experiences with tube power amps have left me with an impression of darkness and constriction, despite however open the midrange presentation was. Not enough sparkle and life. Well, the BAT monos do away with these doldrums. Openness and transparency, speed and immediacy . . . that's what I hear from this pair of BATs. Musical enjoyment radiates with a sense of ease and distinct lack of restraint. It seems that the BATs get out of the way and provide a very unobstructed venue for the musical values to materialize. Certainly, it is not a case of smoothing off the essential transient components and making things nice and smooth and polite. Far from it. Dynamics



are remarkably forceful, and they come with inner detailing that is simply beguiling. This is a product that makes its presence felt in the most subtle and

The VK-60 is one great amplifier, with an ability to stay out of the way of the music.

desirable way. Its presence is affirmed by its ability to stay out of the way of the music. It is present because it is absent!

To be sure, this is one great amplifier. But I would not have been able to unravel its full capabilities without some similarly refined equipment surrounding the BATs. The Museatex BIDAT D/A by Ed Meitner has benefited from a several recent revamping sessions and it has gotten to where its performance simply sends shivers up and down my spine with its uncanny ability to supply musically satisfying and sonically credible inputs for the amplifiers. This has not been a process of tweaking but a re-examination of the design and followed up with attendant well thought-out remedies. I want to emphasize that whenever I critically evaluate amplifiers, the BIDAT feeds the amplifiers directly, eliminating the possibility of a pre-amp cluttering up the sound of the system with a contribution of its own.



The DECADE cables from TARA Labs have also managed to keep me overwhelmed with their consistent ability to keep the signal as uncolored as possible. And its not for lack of trying. Having tried a number of other highly regarded cable products over the years, I am left with the impression that these products did indeed deserve the praise that they had received, but the DECADE series consistently was the preferred choice. In the end, TARA Lab cables were more transparent, exhibit a remarkable spectral balance, and have an ability to maximize the transfer of the signal subtleties between the system components while keeping themselves very unobtrusive.

I feel very confident in praising the BAT monos

because it was in the speaker area that these amps could be subjected to difficult loads from a very wide variety of models. A list consisting of Paragon Regents, Celestion SL-600s, Platinum Reference 1, Gershman Avant Gardes, and Sony SS-9s represents about as much variety as can be expected for a reviewer to have available for an amplifier review.

CONCLUSION

I must confess that I will always gravitate to a product that appears to have been based on sound engineering as opposed to an approach that implies the discovery of some proprietary magical principle or topology. BAT is about as straightforward in their engineering presentation as can be expected. Add to that their ability to produce products that have the high-end community abuzz, and they are people who deserve lots of recognition.

My experience with the BAT monoblocks has been thoroughly enjoyable and eminently satisfying. These amplifiers are capable of drawing the listener into the music in a mesmerizing manner with their ability to provide a signal path that does the music full justice. They have an ability to stay true to the harmonic integrity of each instrument,

NOTES

Balanced Audio Technology VK-60 Monoblock Amplifier: \$4,950.00. Balanced Audio Technology, 800 First State Blvd., Wilmington, DE 19804; phone 302/999-8855; FAX 302/999-8818.

Associated Components

Basis Gold Standard Debut turntable; Air Tangent tonearm; Clearaudio Accurate cartridge; Krell Reference phono stage and power supply; Jeff Rowland Design Group Synergy preamp; Wadia Model 7 CD transport; Museatex BIDAT D/A converter; Townshend Seismic Sink; Tara Labs Decade cables, and Paragon Regent, Celestion SL-600, Platinum Reference 1, Gershman Avant Garde, and Sony SS-9 speakers.

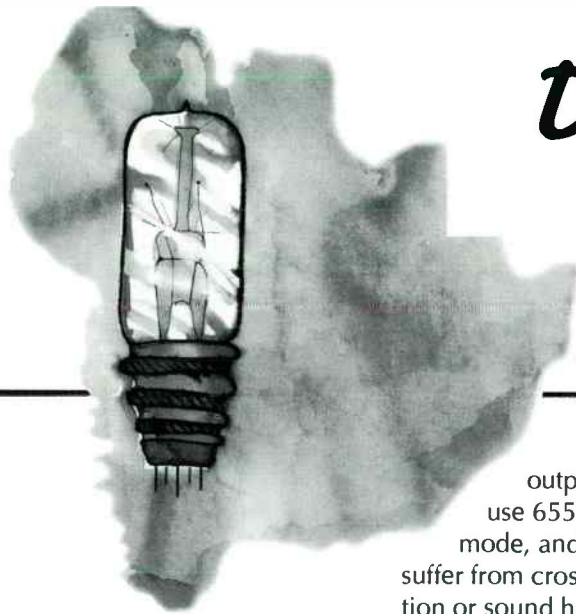
which to me is a most important ingredient in music reproduction.

A power amplifier is an irreplaceable component in today's technology. While we have a choice in our input sources and we can eliminate

a preamp under several scenarios, a power amp is a system component we are stuck with. As such, getting the proper amp is a very important consideration in assembling a top-drawer system.

The BAT monoblocks deserve your very highest

consideration in your search for a satisfying power amplifier. My experience with them convinced me that a very high level performance is there for your taking.



Design Notes

The main power tube used in the BAT VK-60 is the 6C33C-B, a high-current, low-impedance triode design originally used in the power supplies of the Russian MIG fighters, where it had to withstand forces up to 7 Gs. The tube's current delivery is exceptionally high, with more than 10 times the current capability of either the 6550s or KT-88s commonly found in tube amplifier designs. Four of these are used in each amp, along with eight 6SN7s.

The VK-60 uses a novel zero-feedback, single-ended bridge design. In contrast, most tube amps of this power

output ordinarily use 6550s in push-pull mode, and very often suffer from crossover distortion or sound harsh in the upper registers. The VKN-60 is actually four single-ended amps within a single chassis, one for each phase of the balanced signal. To cancel d.c., the outputs of each pair of positive and negative legs of these single-ended amps are bridged prior to the output transformer. This eliminates the potentially large d.c. component and its accompanying core saturation, but requires a floating power supply for each of the four single-ended subcircuits, thus making the overall design more expensive.

One of the most interesting aspects of the VK60's design is its automatic biasing circuit, which keeps each

individual tube at its correct bias level. By compensating for warm-up, aging, and other sorts of tube variation, as well as fluctuations in a.c. line voltage, the VK-60's auto-bias circuit keeps the owner from having to make potentially tricky and difficult adjustments requiring a digital voltmeter, small screwdriver, and a high level of patience.

The unit which I am reviewing here is the VK-60 monoblock conversion which is accomplished by simply paralleling the inputs and outputs of the amp. This brings the power output up to 120 watts per channel and improves the output impedance by a factor of two. In fact, any number of VK-60s can be paralleled together up to the limits of your house wiring, heat tolerance, and wallet thickness.

TOWNSHEND AUDIO ROCK MK III TURNTABLE

with Rega RB 300 Tonearm and
Elite Alignment Gauge



Frank J. Alles

Reviewing any analog turntable can be a tricky business, in that all record playback systems (that is, the turntable, the tonearm, and the cartridge) require precise set-up and fine tuning if they are to function optimally. The folks at Townshend Audio take their analog seriously, and so, they have devised a foolproof and very exacting cartridge

alignment gauge (The Elite Alignment Gauge) to aid their customer in attaining the lowest degree of tracing error at the stylus/record interface. Using this device enabled me to extract an extraordinary level of resolution, and accuracy, from the Rock MK III, as we shall see.

From the get-go, the Townshend impressed the cornstarch out of me from an engineering standpoint. This is a simple, rugged, compact revolver that gets the job done, with aplomb. It manages to accomplish this task without the likes of air pumps (and their attendant tubing noise and a.c. cords); power line conditioners; vacuum platters; the servo-driven, linear tracking, air-bearing tonearms, or even a dedicated stand, one of those things capable of supporting Manhattan! Instead, the Rock incorporates a few novel and innovative features to deal with the basic issues of speed stability, rumble, isolation from resonance, and tonearm and cartridge damping.

The platter and sub-platter assembly are "hung" from a unique fluid-damped inverted bearing, which effectively suspends the platter at its center of gravity. This arrangement provides very stable operation and very low rumble. Most other turntables balance a massive platter above the bearing, which tends to increase the lateral load the bearing must support. All things being equal, this would necessitate much heavier bearing duty to maintain stability and low noise.

Townshend achieves acoustic isolation by supporting the plinth and platter on a proprietary, air-filled, damped synthetic-rubber suspension chamber; you guessed it, it's a built-in Seismic Sink!

What could be cooler than that?

Only the front-end damping trough, I suppose! That's right! The silicone fluid-filled trough, combined with the double outrigger/paddle assembly, mounted on the headshell, works to damp out arm and cartridge resonances and effectively helps couple the arm to the disc at audio frequencies. In practice, this trough is virtually klutz-proof, and it's easier and quicker to use than your average record hold-down clamp. If you feel that the sound of your arm just can't be improved by this feagure (which is doubtful judgment), the trough

assembly is easily removable by unscrewing one 4-mm Allen-head screw. However, once you hear the improvement the trough imparts in a direct A/B comparison, I'm betting you'll opt to use it!

The Townshend Rock is an attractive turntable, which will impress you with its rugged manner.

Aesthetically, I find the Rock quite attractive; it has a certain understated simplistic elegance. There is a well-balanced contrast between the black acrylic-bedecked plinth and the translucent

clear white platter, with its matching one-piece clear-acrylic disc clamp, which sports a black knurled knob. The gloss black trough is a curious looking device, and the Rega tonearm blends well, being black, with silver-colored counterweight and cueing lever. At only 40 lb., in a svelte 17 by 15 by 4 inch package, the rugged Rock will not over-crowd nor will it overload your equipment rack.

SET-UP!

The Townshend Rock MK III is not particularly difficult to prep for play. First you level the table by screwing (or unscrewing) each of its three feet, whatever it takes to get the plinth level. A bubble gauge is provided, but I decided to use a real level, which I found easier to read. Next, pour some bearing fluid (supplied) in the bearing well and install the sub-platter, taking care not to lose the ball bearing and to seat it correctly, as specified. Slip on the drive-belt, then the platter, onto the sub-platter (the concave face of the platter with its rounded edge face up, to greet the record). Check the air in the suspension, then comes the "fun part," installing the cartridge.

As I stated previously, Townshend includes their Elite Alignment Gauge, along with its own dedicated instruction booklet, to enable one to position his stylus on the one true path to recorded bliss. This gauge is available from Townshend dealers, for use with other turntables as well at a price of about \$35.00. I recommend it highly to those individuals interested in getting the lowest possible tracking error from their pivoted tonearms. Unlike many other gauges, this gauge uses the spindle of the platter as the reference point for proper tangential alignment to the record groove. Most gauges refer to the pivot point of the arm--but what if your arm is not mounted in the proper geometric relation to the spindle? In that case, rei-

erencing from the spindle is the better way to go and will yield the minimal tracking error (and thus, the lowest distortion) possible in that circumstance (gospel, according to Townshend Audio's Steve James). Whether you buy Steve's theory or not, the simple fact is I got superlative results using The Elite Gauge!

Mike Hobson of Classic Records was nice enough to come to my home and offer me abbre-

**Save yourself
a possible headache;
buy the Elite gauge.**

viated set-up instructions using the gauge, plus tips for ensuring proper vertical tracking angle (VTA) and tracking force, which, as it happens, are interdependent. When Mike arrived, I had already installed my Monster Alpha II H.O. cartridge in the Rega RB 300. Townshend supplies the Rega arm modified with Cardas wiring, rhodium cartridge clips, and RCA jacks, with a quick release lock-ring to facilitate easy manual setting of the VTA. Mike informed me that the Rega arm uses bearings of the same high quality as are usually found in the very costly Sumiko SME V tonearm. He further explained that the front trough damp-

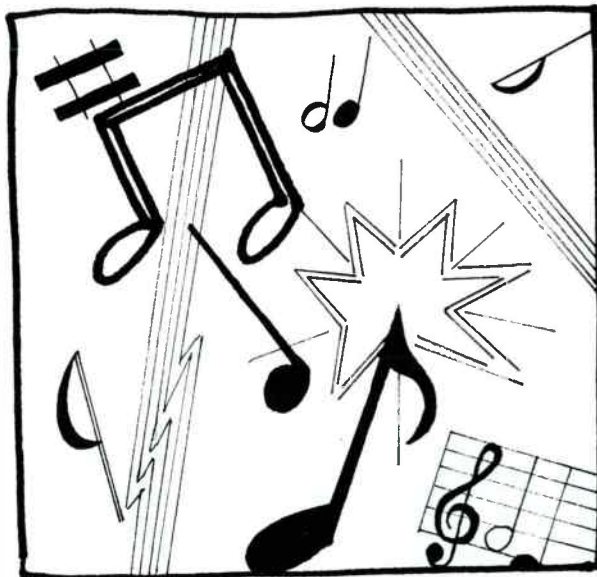
**The Rock's trough
system provides
lots of damping.**

ing, as implemented on the Rock, goes a long way toward narrowing the potential performance gap between the Rega arm and some much more costly designs. Initially, Mike checked my cartridge installation, and found it to be quite close to ideal for the RB 300. It turned out to be off by about 0.2 percent, so we figured that was close enough to audition before switching to my better cartridge, a Sumiko Transfiguration.

One problem that cropped up with both the Monster cartridge and the Sumiko was that the Rega's outrigger assembly was contacting the lip of the damping trough before the stylus hit the record. I had temporarily resolved this issue by using a 2-mm plastic spacer between the Alpha II cartridge and headshell. However, because Mike had done such an excellent job of installing the Transfiguration and because the hour was late, we

opted to do a little listening in that configuration, albeit sans trough contact.

The next day, a call to Steve James, of Townshend, provided a solution to this problem of clearing the trough. It was suggested that instead of sandwiching the headshell between the outriggers, that I mount both outriggers to the top of the headshell. James feels this fix should work with 95% of all cartridges, including the Alpha II, however with the Transfiguration, which has a very shallow profile, I still ended up using the 2-mm spacer between cartridge and headshell. Steve thought that perhaps it might have been better to locate the second spacer between the top of the headshell and the bottom outrigger, to preserve



the sanctity of the cartridge to headshell marriage. But, since I had attained excellent sonic results with the former set-up, I was not about to go fixing something that wasn't broken!

SHORTCUTS!

To begin, set the approximate VTA and tracking force for your cartridge. Steve intimated that the rule of thumb, for a 220-mm tonearm, is to swing the arm to the center of the platter, and locate the stylus tip to overhang the center spindle by about 18 mm, center to center. Next, install the alignment gauge on the spindle, and rotate the platter to set the stylus on the 60-mm line. Align the cantilever perpendicular to the 0% distortion line while resting on the 60-mm line. Mike told me that his personal experience with the Rega RB 300 dictated that the stylus tip intersect the 60-mm line at approximately -0.5% distortion. Once you have

done this, rotate the platter to align the cantilever with the 140-mm line, then set the stylus down. It should read lower than +1.0% distortion. If it does, you can go back and check for a similar low distortion reading at the median points. It doesn't matter whether the reading is negative or positive, just so long as it is low. If this is the case, tighten the cartridge mounting screws securely, you're there. If not, go back to the 60-mm line and repeat the procedure from there.

Accurate settings of tracking force and VTA will pay dividends in good sound.

The instruction booklet will tell you to check the alignment at 60 mm, and then on each successive line, out to the 146-mm line, plotting your own distortion graph as you go. If you're like me, that way seems much too tedious and time consuming to take seriously. It won't guarantee you any better results, so why put yourself through the hassle??

Once you have the cartridge properly aligned in the headshell, it is time to zero in on VTA and tracking force. With the VTA, I'd start a hair high, then lower the setting incrementally, listening between each change. When the highs and the vocals "lock in," with good extension but without excessive sibilance or roughness on the vocal, you're getting close. When the bass is the tightest AND most extended, you should be there!

To set proper tracking force, I would again start at the high end of the recommended range, decreasing the force about one-tenth of a gram at a time, listening to each change as you go. You will reach a point where it sounds quite good. When you pass it, the sound will become progressively edgier and less focused. Go back to where it sounded the best.

As one might suspect, VTA and tracking force are inter-related. Therefore, changing one setting can sometimes necessitate readjustment of the other. To further complicate things, cartridge suspensions are also affected by temperature and humidity, and are known to deteriorate over time. A cartridge must sometimes be readjusted to compensate for this "aging" process. It is almost a shame that they sound so magnificent, when you get the various adjustments "just so!"

Last, but not least, you should check the anti-

skating force. You can start at the value corresponding to your tracking force. If you have a test record that checks for equal distortion in both channels, use it. If not, you can substitute a record with a highly modulated vocal. Reduce or increase the bias force until one channel is distorting, then adjust the force back to the point where mistracking stops. With my particular set-up, my tracking force is set to about 1.9 grams and the anti-skating force at about 1.4.

THE SOUND!!!

For my formal introduction to the sound of the Rock, I used my old favorite cartridge, the Monster Alpha II, H.O. moving coil. My AHT phono stage is, and was, loaded at 280 ohms in parallel with the normal 47 kilohms, for all testing (this is a value I've found to work optimally with a few different cartridges). Since I had used the same Monster cartridge in a Sumiko FT-3 tonearm with my VPI HW-19 MK IV, I thought this would be the fairest comparison. I should mention that my initial listening was done without the benefit of the damping trough, to enable me to assess its worth later in the testing.

Listening to the 12-inch single of Debbie Gibson's "Shake Your Love," (Atlantic 0-86651) I was immediately struck by the clarity and focus of the presentation. Soundstaging was wide and deep, replete with the simulated four-channel surround effects recorded on that disc. High frequency detailing was outstanding, and low level resolution was easily on par with the VPI. While the bass was quite good, I thought perhaps the VPI had a slight edge in tautness and extension. Overall, though, I preferred the Rock's ultra-quick, detailed and focused rendition. This, I felt, was due, at least in part, to the precise cartridge alignment made possible by using The Elite Gauge.

Engaging the trough served to widen the performance gap between the two turntables to the point where the comparison itself bordered on ludicrous. Yes, it is definitely better with the paddle in the ol' canal. Bass extension, detail, and impact all improved, as did the relative speed of all transients. There seemed to be a bit more air on the top, and the depth of the soundstage appeared to expand. Actually, the bass became so taut and powerful that it was quite startling on some recordings. Play a disc such as Pink Floyd's The Final Cut (Columbia QC 38243) for example, and you'll understand exactly what I'm saying when the drum sforzandos hit! And HIT, they do!

You will also hear an improvement throughout

the midrange. Instruments were palpable in their solidity, yet there was no overshoot, or ringing, going on. Images appeared instantly, firmly locked in their own air, in the soundstage, and then vanished in a blink.

THE MIGHTY FIG!

"This was great," thought I, but... "Holy Transfiguration, Batman," when I changed over to the "Mighty Fig," things really started to fall into place! Sure, the Sumiko Transfiguration costs more than the Townshend Rock and the Rega RB 300 combined, so what! This made for a simply breath-taking sonic portrait, the likes of which I had never before experienced in my system. As President of the New Jersey Audio Society, I've had the opportunity to listen to many top-rated turntables, and to date, I've encountered in my travels only one system that can rival or best mine, while using the Townshend (no brag-- just fact). That system belongs to Dan Fanny of American Hybrid Technology, who owns a modified Goldmund Reference turntable, with, I believe, a Goldmund Gold cartridge. This bespeaks volumes for the affordable Rock MK III!

The Fig is just one of those cartridges that is just so exacting in its timbre, from the low bass right on up through the lower treble. It is so coherent, fast, and correct sounding, that my Monster Alpha II (which I always thought was very accurate, save for a peak in the upper treble) sounded almost defective in comparison. Suddenly, vocals and all manner of midrange instruments, from horns through strings to piano sounded so natural, I had to pinch myself for a reality check. Listen to Ms. Jones' vocal and Bruce Woolley's odd percussion on Grace Jones' "Party Girl," from Inside Story (Manhattan Records ST-53038). There is a very breathy, intimate quality to many of her cuts on this album, which makes the disc a little spooky. Being alone in my room with Grace is kind of scary, yet thrilling at the same time!

It wasn't until I broke out my sacred copy of Witches Brew (RCA Victor reissue LSC-2225, not the classic Miles Davis jazz recording) that I fully realized the awesome scope and prowess of the Rock/Fig combo. For the first time, my system had ceased being an electro-mechanical playback medium, it had truly transformed into a symphony orchestra, right there, in front of my ears. The Tympani and bass drum had authority, ample weight, and accurate pitch definition. Brasses sounded like brasses, woodwinds like woodwinds,

and violins and celli like the sweetest angel's voices, this side of heaven. Nirvana had come or I had gone there. Everything from the softest pianissimo to the loudest crescendo was reproduced with all the nuance, power, speed, and subtlety of the real thing. My minimal connection to reality was a slender thread of tape head noise and the very low record surface noise, which were only factors during every quiet passages.

**I was immediately stuck
by the clarity and focus
of this turntable's
presentation of a wide,
deepsoundstage**

I hope I am making myself understood, because the authenticity of this presentation was really quite beautiful, yet startling, even frightening, in its impact. Blasts from both massed brasses and bass drum or tympani sat me straight up in my seat on crescendos, while the natural sweetness of solo violin or harp or triangle was enough to evoke tears (try Danse Macabre or A Night On Bare Mountain). Reproduction of ambient hall rumble gave the music much of the grandeur and dimension one can normally only experience at the live event.

CONCLUSION

It is my opinion that Townshend has exceeded its own expectations and design goals with the Rock MK III. Their unique, innovative technology has led to a product with superior acoustic isolation, very high mechanical stability, and a brilliant way of dealing with cartridge resonance. The front-end damping, does, in my experience, effectively serve to minimize differences between pick-up arms. Thus, one can attain a much higher level of performance from an arm of modest quality (like the Rega) than would otherwise be possible. Add to this precise cartridge alignment, facilitated through use of The Elite Gauge, and you are well on your way to analog heaven. Besides, with the money you save buying the Rock from Rega, you will have that much more to spend on a top-quality cartridge (instead of mounting that Blue Point Special in your Basis/Graham, for example).

What sets the Rock apart from its similarly priced competition is its degree of tonal neutrality from top to bottom. The utter lack of coloration this turntable achieves is, in a word, astonishing.

**What sets the Rock
apart from its
competition carrying
similar price tags is its
astonishing neutrality.**

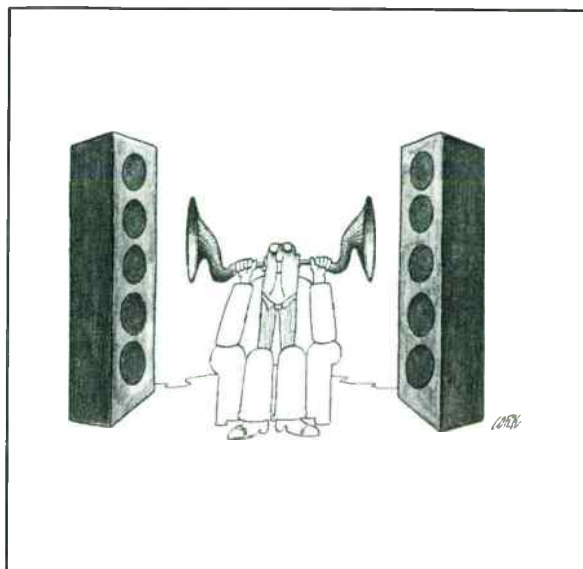
Most noteworthy is its reproduction of the lower octaves. Here, the unassuming Rock lives up to its name. The control, extension, and pitchdefinition that its capable of providing in the nether region would be impressive and respectable at ANY price, but it is unprecedented in a design this reasonably affordable.

I will concede that the Rock's overall performance might be equalled and even surpassed by a handful of high-end turntables, most at large multiples of the Rock's asking price.

But many of these are extreme designs, requiring external motorized air pumps, add-on power line conditioners, and dedicated stands to support their significant girth. Additionally, the Rock may lack the ultimate panache and elegance of some of the "mega-tables."

The question one must ask himself is this: Is a little extra polish and glitz, and maybe a slight performance edge, worth the added expense and aggravation of installing such a "beast" in your listening room?

I have resolved these issues in my own mind and I am at peace, and that's why I am buying the Townshend Rock MK III turntable!



NOTES

Townshend Audio Rock MK III turntable: \$1,795.00; Rega RB 300 tonearm, modified, 825.00; optional dust cover, 125.00; Elite Alignment Gauge, \$35.00 or included with turntable at purchase. Distributor: Townshend Audio Inc., 10375 Richmond Ave., Suite 975, Houston, TX 77042. Phone 713/266-3406; FAX 713/266-1039.

Associated Equipment

Analog Source: VPI HW-19 MK IV turntable, Sumiko FT-3 arm, Sumiko Transfiguration moving-coil and Monster Alpha-II H.O. cartridges, American Hybrid Technology Phono Stage (custom).

Digital Source: Parasound D/AC-2000 Ultra converter, Parasound C/BD-2000 belt-drive transport with D.H. Labs D 110 Silver Sonic AES/EBU digital cable or Full Spectrum Esoteric RCA coaxial cable.

Preamp: Custom tube high-level stage using single 6FQ7 dual triode by American Hybrid Technology, and home-brew passive.

Amps: American Hybrid Technology high-voltage servocharge tube monoblocks with dual triode input drivers and Sonogy Black Knight.

Speakers: Acoustat Monitor IIIs with five-wire panels (operating full range), Paradigm Reference Studio/100.

Cables: Full Spectrum Audio Exotic power cords (on AHT monoblocks), Full Spectrum Audio Signature power cord on DAC; Full Spectrum Audio Signature interconnects, Luminous Audio Monarch interconnects, and Full Spectrum Audio Signature speaker cables.

Tweaks And Accessories: Sonex panels, Room Tunes, Shakti Stones, Andy Bartha Audio Resonance Control Devices, Sims Navcom pucks, Mod Squad Tip Toes, AudioQuest Sorbothane feet, Superballs, home-made isolation bases and cable bridges, and other home-brew items.

Clayton Audio M-70 Class-A Monoblock Amps



Pop Quiz! What mid-priced monoblocks sound sweet, detailed and "in control," with stompin' bass? Answer: The Clayton Audio, Class-A, M-70s!

Clayton Audio is a small company and newcomer to the High-End Arena, based in (you guessed it) Clayton, Missouri. Developed by retired IBM engineer, Wilson Shen, the M-70s are claimed to operate in pure Class A (in the high-bias mode) up to their full rated power of 70 watts into 8-ohm loads. Power doubles to 140 watts into 4 ohms, and the amp will handle

this demand with the utmost stability and high current capability. Set to the low-bias position, the M-70s will run a bit cooler, though power available in Class A drops to about 40 watts at 8 ohms. Wilson Shen says that for practical purposes there is very little audible difference between the high- and low-bias positions, and I did find this to be the case, but more about this later. However, for the purpose of this review, most of my listening was done in the high bias mode.

The massive heat sinks never seemed overly hot to the touch

even at the high-bias setting. In my coolish listening room (65 degrees F.), most of the time I found them merely tepid.

The M-70's power supply contains a 700-VA toroidal transformer with 100,000 microfarads of capacitance. Separate power sources are used for the driver and output stages. A precision power-on sequencing circuit is employed to prevent any damage that might be caused by an initial in-rush power surge. No capacitors are used in the signal path. Because of the "overkill" nature of the power

supply and the incorporation of new (to audio applications) bipolar output transistors from Motorola, the Clayton Audio M-70s are said to be ideally suited for driving difficult loads, such as certain electrostatics like Acoustats or Martin Logans as well as other demanding speakers like Apogeess. In fact, each amplifier uses several pairs of the Motorola output devices which are each capable of handling 100 amperes of peak current (200 amps of continuous current per channel). (*Holy Guacamole!*) Note, however, that due to the practical limitations of the power supply, the output transistors of the M-70 will never actually "see" that much current. [Editor's Note: Mr. Shen tells me that each bipolar output transistor is capable of 300 watts, 50 amps of continuous current, 100 amps peak current. Four pairs of output transistors are used in one channel.] Put simply, this means they won't be over-stressed and will thus live longer, "happier" lives.

Construction And Features

The build quality of these babies is most robust, with each monoblock tipping the scale at 40 pounds. Expansive heat-sinking occupies the entire top panel, the sink itself measuring about 9 inches wide by 18 inches long and 1¾ inches deep. Its cooling capacity is rated at 0.13 degrees C. per watt. The black-anodized, brushed-aluminum face plate is a full 3/8-inch thick. The unit's bottom-mounted feet hold the chassis 1 inch off the floor which is well above the depth of most carpeting so as to circumvent any cooling problems. Additionally, there are four 1¼-inch feet on the rear panel. They let you stow the

amps vertically when not in use, which would save space, and keep the user from scuffing those pretty gold-plated German WBT speaker connectors if you happen to push the amp up against a wall! Also on the rear apron are a WBT RCA input jack for single-ended operation, an XLR-type input for a balanced mode set-up, and a knurled chassis-grounding thumb screw. An IEC receptacle at the lower corner facilitates the use of after-market a.c. power cords. A red LED indicator on the right of the rear panel shows that the amp is powered up, while three 5-amp, fast-blow fuses are centered to its left.

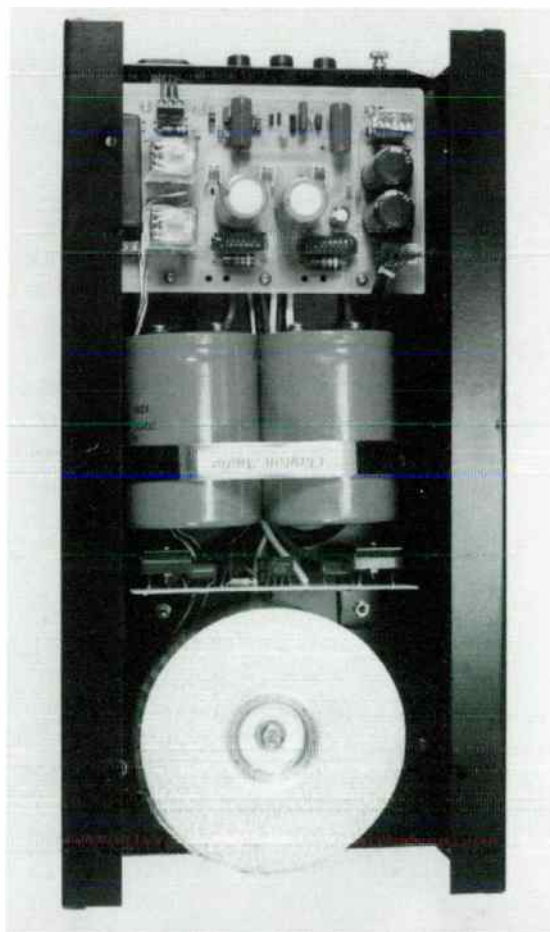
The front panel contains an inset portion on which two rocker-type switches and their corresponding red LED indicator lamps reside. The left-hand switch selects power on or off, while the right-hand switch allows one to toggle between the high- and low-bias settings, and a LED shows which mode you've chosen. Since the amplifier is very stable, you can change the bias back and forth while it's in operation.

The Clayton Audio M-70 is a handsome, well-thought-out, deftly executed, rugged design. Even its packing carton, with judicious foam inserts and actual wood panels on top and bottom, shows uncommon attention to detail and its designers' commitment to customer satisfaction. All Clayton Audio amplifiers are warranted to be free of any defects

in design or manufacture for a period of three years from the date of purchase without charge for *parts or labor*. The purchaser is, however, responsible for shipping the unit to Clayton Audio with its original packaging, though Clayton Audio will cover the return shipping fees. The warranty is transferable provided the warranty registration card has been completed and returned, officially registering your unit(s) with Clayton Audio.

Installation

Setting this beast up was simple. My choice of source was either the Townshend MK III Rock turntable with Transfiguration cartridge and AHT phono stage or my trusty Parasound Duo, the D/AC-2000 converter and C/BD-2000 belt-



drive transport. These fed a home-brew passive preamp via Full Spectrum Audio Signature interconnects, and the preamp fed the M-70s via Sonoran Cactus interconnects. Full Spectrum Signature speaker cable linked the amps to the mid/top section of my Paradigm Reference Studio 100 speakers and to my custom made (by George Mueller) outboard tweeters. Luminous Audio Prestige cable provided current to the bass drivers. The digital cable was the D. H. Labs D-110 AES/EBU balanced (it is my understanding that D. H. Labs supplies some of the internal hook-up wiring used in the M-70 amps).

For my initial listening sessions, the stock 14-gauge power cords supplied by Clayton were used with the amplifiers. Wilson Shen recommends plugging these amps directly into the wall eschewing any power line strips or a.c. filtering devices and I strongly support this advice. The amps seem to draw a fair amount of current on musical peaks and using an a.c. filter not only did *not* improve their sound, but actually compressed dynamics and rendered the soundstage more closed-in. The more juice you can directly feed the Claytons, the better they'll sing for you!

Pssst, Hot Tip! I ended up using a two-foot, 12-gauge, three outlet extension cord (Woods Cat. No. 824) purchased at The Home Depot for about \$13.00. My choice of duplex receptacle is a Pass & Seymour Legrand 20-amp #5362. Yes, it does make a perceivable difference and yes, this combination is *killer*. It was recommended to me by Full Spectrum Audio's Ralph

Romano. Give it a try, it's effective and inexpensive! -

A minor problem with grounding occurred when I initially installed the amplifiers, the speakers produced a fairly irritating 60-Hz hum. Wilson Shen claims my a.c. receptacle isn't properly grounded although my

The M-70's marvelous midrange is as transparent as it is smooth.

circuit tester indicates all is well. In any event, floating the amplifiers ground prongs by using "cheater plugs" totally banished the hum, leaving my 91 dB-per-watt efficient Paradigms quite quiet.

Mechanical hum (from the vibrating chassis) was somewhat obtrusive on the first pair of Claytons I received. One day, when one of my audio society friends was visiting, he remarked that he could hear the amps (one more than the other) buzzing at the listening seat some seven or eight feet away. I had noticed this anomaly prior to that day, but my friend's reaction prompted a call to Wilson Shen. Mr. Shen suggested that perhaps the orangutans (I'm paraphrasing here) at UPS were a tad over-exuberant in their handling of his precious cargo and that a transformer may have had its grasp on the metalwork compromised during shipping. Considering the excellent packaging and general quality of the metalwork that Clayton provides, these amps would had to have been "bounced" mighty hard to accomplish this. However, Mr. Shen was very accommodating and sent me a

second pair of M-70s which were unquestionably quieter, though there was still a very slight mechanical hum evident after the amps had been playing a few hours and thoroughly warmed up. In my subsequent conversations with Wilson, it was determined that a shipment of improperly made transformers were the cause of this problem, so (you guessed it!) I was shipped a third pair of monoblocks with revised transformers. I played this pair non-stop for the better part of a week, and although I can still detect a *trace* of mechanical hum, my head must now be within inches of the M-70s instead of feet! Future production runs will incorporate the new transformers thereby rendering this a non-issue.

Da Bite Is Baaad As Da Bark!

From all outward appearances and any presently plausible school of design, theory and conjecture, one would expect the Clayton Audio M-70s to be capable of excellent sound reproduction—and so they are. My "first bite" came from the sax of Branford Marsalis on "Housed From Edward," from *Trio Jeepy* (Columbia CK 44199). Not only did the sax have palpable presence, but it had body and a touch of soul to boot. The cymbals on this cut impressed me as being particularly focused and correct in timbre. As I luxuriated to other familiar tunes, it became apparent just how adept the M-70s are at getting the top end right. Listen to Jeff Hamilton's delicate opening brush work on "Li'l Darlin'" from The Ray Brown Trio's *Summer Wind* (Concord

Jazz CCD-4426). There is no hash, trash, or smear happening here. Instead, shimmer, finesse and detailed sound abound. Hardness and edginess are adjectives I do *not* associate with the Clayton sound.

For a slice of bass, I got my fill from Cake's *Fashion Nugget* (Capricorn P2 32867). Try a cut like "Race Car Ya-Yas," and you'll hear some tight, clean, and forceful thumb thumpin' while you laugh along to the inane lyric—"the land where large fuzzy dice still hang proudly, like testicles from rear view mirrors." Cute simile—don'cha think? By the way, if you dig Alternative Rock, *Fashion Nugget* is one of the better albums I've come across in quite a while (excepting the *needless and gratuitous profanity* on Track 11, "Nugget"). In any event, the point is that the bass of the M-70 is ample, dynamic, and satisfying. It's definitely a notch or two above most amplifiers I've auditioned in terms of both dexterity and extension.

Moreover, it gets the sound of bass instruments correct. From bass guitar to stringed bass to drums (yes, you can hear the tuning on the skins), it just doesn't get much better than this! It is palpable and very close to the way I hear it at live events. Before the Claytons, I didn't think my Paradigm Reference 100s were *capable* of providing this level of fidelity in the nether-regions.

As good as the treble and bass reproduction are, they are held together in delightful harmony by a *marvelous* midrange that is as transparent as it is smooth. "How smooth is it?" you query. Well, HE

sports fans, I'll tell you, to my ears it is totally devoid of texture or grain, and that's about as smooth as it gets. Two recordings that exploit these qualities are most cuts on The King Singers' *Good Vibrations* CD (RCA/BMG 09026-60938-2) which contains some very superb acappella harmonies. And, for you osculators of vinyl, try (If you can find it) the 12-inch single of ABC's "When Smokey Sings" (Mercury 888726-1); the backing vocals are so sweet you may get a toothache—but never an earache, I promise!

Though my Paradigm speakers are fairly efficient, their impedance curve ranges between less than 4 ohms to nearly 18 ohms between the upper-bass and the midrange, respectively. Perhaps the Clayton's ability to drive difficult loads was responsible for the remarkable midrange liquidity and the improved harmonic accuracy.

Happily, all this smoothness is *not* caused by rounded transients, constricted dynamics, or any lack of detail. I'm here to tell you that the Clayton Audio M-70 is very adroit in all these crucial areas. For a little taste of transient snap, lash yourself into your comfy chair for a few

thwacks of acoustic guitar on *The Best Of The Gypsy Kings* (Nonesuch 9 79358-2); it's guaranteed to keep you in your place! Not only did the M-70s do an exemplary job of catching the initial bite of the strings, but it was way above the status quo in preserving the harmonic integrity of the instruments. The reality of this set in when I *removed* the Clayton amps from my system and reauditioned the CD with my reference amp. Though I consider my reference to be well above average in terms of smoothness, transparency and timbral accuracy, it was almost painful for me to realize how much better The Gypsy Kings sounded through the M-70s. Certain recordings were plainly more intimate and harmonically correct on these feisty monoblocks.

For a change of pace pull out Pope Music's *Reel One Sampler* (PM2002-2) and put on "Bolt" by Dimitri Shostakovich. Check your balance lest the opening bass drum thwacks knock you down! Full symphonic classical works are the true litmus test for most audio gear, due to the complex interaction between the various sections of the orchestra playing in unison, as well as the potentially extreme dynamic swings one's system



handle. Here, the noble M-70s showed their pedigree on works such as Wagner's "Lohengrin" from *Overtures & Preludes* (Deutsche Grammophon D 101484) with the string section flailing away on the left, while on the right the brasses bleated with a remarkable presence and true-to-life timbre. Individual horns basked in their warm burnished glow while contributing their unique signature to the collective body of the symphony orchestra.

Caveats, Or Not To Caveats?!

Even when judged by the strictest of standards, it is difficult to fault the Clayton Audio M-70's adept renderings. As I see it, the Clayton amps don't do anything overtly irritating that would gnaw at the listener over time. Actually, I would categorize the "Clayton Sound," as being seductive, maybe even addictive, not in the euphonic sense, but rather that they are highly accurate and communicative of the ebb and flow of the music they reproduce.

What faults they have are sins of omission, mainly a slight constriction of soundstage width. While the M-70s do recreate *considerable* depth of the sound field, they fall a bit short in locating images to the extreme far left and right of the stage. Instead, performers and instruments seem to be brought closer to center-stage. This is great if you are having center-fill problems, but it does diminish the perceived "space" between instruments. This effect hit me as being the most obvious on Madonna's *Immaculate Collection* CD (Sire/Warner Bros. 9 26440-2). This particular

recording, rife with pseudo four-channel effects, transcends the room boundaries in virtually every direction, either when using either my AHT/Acoustat or Sonogy/Paradigm speaker systems. Substituting the M-70s for the Sonogy Black Knight rendered the spatial relationships noticeably less evident (specifically far left/right and the space *behind* the listener). Thus, the mixing artistry of Shep Pettibone and Goh Hotoda was somewhat diluted here.

After writing the above paragraph, it occurred to me to substitute the same a.c. power cords I had used with the Black Knight for the 14-gauge cords supplied with the Claytons. I had pur-

These Clayton M-70 amps are seductive, maybe even addictive.

chased these cords through Dan Fanny of American Hybrid Technology years ago for use with my AHT monoblocks. I have since upgraded to Full Spectrum Audio Exotic cords there and "passed the other cords down" to the Sonogy amp where they sound quite good. These are not "Audiophile cords," they are your basic black-jacketed, garden-variety stranded copper, (probably less than \$10.00 each at a good electronics supply shop) marked simply "16/3, SJT, E67955 CSA LL3773". Can you say "Huge Difference!" I thought you could! Seriously, this minor tweak was all it took to expand the soundstage to boundary-defying proportions, every bit the equal of what I was hearing through the Black Knight. In

addition, the bass appeared to reach down another half octave, and did so with better definition. In fact, my preceding comments regarding the Clayton's bass performance were revised *after* I'd made this change!

When I confronted Wilson Shen with this observation, he presented me with custom a.c. cords of his own manufacture. The conductors are interwoven 12-gauge, silver-coated, stranded copper with a heavy-duty Hubbell grounded plug, all covered with an audiophile-friendly, black-mesh jacket. These Clayton Audio cords proved to be an *even better* match for the precocious M-70s, and I believe Shen plans to market them at about \$300.00 per cord. Having auditioned many "High-End" a.c. cords in my system, my best advice is "just do it"! This would appear to be the *most significant single upgrade* one can make

to these fine amplifiers. Isolation bases or audiophile feet would be my pick for secondary tweak path.

Summing Up

The Clayton Audio M-70s are, in my opinion, cleverly-conceived and glorious-sounding devices, capable of providing the demanding listener years of trouble-free bliss. They excel in certain areas, notably those of focus, transparency, timbre, and speed (wonderful on guitar and vocal works!). I'm certain there are very few amplifiers *including* the mega-buck units, be they solid-state or tube, that can equal the Clayton's level of mid-band virtuosity. Once you experience their magic in your own system, you may be hooked. The combination of a coherent,

harmonically rich, grain-free midrange combined with the reliability and long life of transistors is akin to making a fortune on Wall Street and the next day winning the lottery, double lucky!

This superlative performance is not confined to the midrange. The unit's bass and treble are virtually cut from the same cloth and offer the listener a seamless blend of adroit detailing, dynamic contrast, and musical accuracy. Indeed, while wrapping up this review, I received a new AES/EBU digital cable, a Full Spectrum Audio Exotic (\$1000.00). This cable, as far as I'm concerned, rewrites the book in the areas of openness and high-frequency finesse, and it also renders dynamic swings (both macro and micro) with paralyzing aplomb. This point was driven home with CDs such as Rusted Root's *When I Woke* (Mercury 314522713-2) where many cuts changed from a whisper to a roar, then back again in the breadth of a gasp. The M-70s delivered these mind-boggling musical goods with almost callous ease!

There was a general paucity of perceived flaws, and as noted, changing the stock power cords worked to expand the soundstage and to make very good bass, "great bass". Properly installed and tweaked, the Claytons achieved a level of performance with my Paradigms that blew me away! I never believed these dynamic speakers would attain the degree of musical fidelity they exhibited with the M-70s. Armed with such ordnance, they came dangerously close to usurping my Acoustat/AHT system as my primary reference (note that a direct comparison of the AHT monoblocks to any conventional

amplifiers is not possible because the Fanny-amps are set up to drive high-impedance electrostatic panels directly, without interfaces or matching transformers). If the Claytons don't sound good in your system, you'd be best advised to look elsewhere in the loop to discover the culprit.

If you have very inefficient speakers and like your music at deafening levels (a pity in itself), these amps may lack the "juice" to sate your addiction. This, I suppose, can be construed as the most grievous "flaw" of these fine monoblocks. Simply

tragic! (Note my irony, please.) I will say, however, that they are capable of playing my Paradigms at much louder levels than I am comfortable listening to, with no noticeable degradation of performance. Crescendos were rendered loud and clear without a hint of compression, muddling, or collapse of soundstage.

These amps are solidly built, handsomely finished and user friendly. At \$5,600.00 the pair, it is my pleasure to recommend this fine product for inclusion as the heart of many a High-End reproductive chain.

NOTES

Clayton Audio M-70 Class-A Monoblock Amplifiers, \$5,600.00 per pair. Clayton Audio, 8151 Stratford Ave., Clayton, MO 63105. Phone 314/862-6017, Fax 314/862-0765; e-mail Claytonamp@AOL.com.

Associated Equipment

Analog Source: Townshend Audio Rock MK III, modified Rega RB300 tonearm, Sumiko Transfiguration moving-coil and Monster Alpha-II H.O. cartridges, American Hybrid Technology phono stage (custom), BYLUX a.c. line filter.

Digital Source: Parasound D/AC-2000 Ultra converter and Parasound C/BD-2000 belt-drive transport.

Preamp: Custom tube high-level using single 6FQ7 dual triode by American Hybrid Technology, and home-brew passive.

Amps: AHT high voltage servocharge tube monoblocks with dual-triode input drivers, Sonogy Black Knight, AHT-modified Dyna Stereo 70.

Speakers: Acoustat Monitor IIIs with five-wire panels, Paradigm Reference Studio 100, with custom-built add-on tweeters by George Mueller.

Cables: Full Spectrum Audio Exotic power cords (on AHT monoblocks), Full Spectrum Audio Signature power cord on DAC, Full Spectrum Audio Signature interconnects, Luminous Audio Monarch interconnects, Sonoran Cactus interconnects, Full Spectrum Audio Signature speaker cables, and Luminous Audio Prestige speaker cables.

Tweaks And Accessories: Sonex panels, Room Tunes, Shakti Stones, Andy Bartha Audio Resonance Control Devices (RCDs), Sims Navcom pucks, Superballs, home-made isolation bases and cable bridges, etc.



Adcom GFA-5200 Amplifier

Have you noticed how many high-end amp reviews begin with the arrival of huge packing crates, and then move on to a description of the assorted medical problems created by the wimpy, muscle-toneless reviewer trying to prod his latest prize catch into the listening room? Get out your handkerchiefs. Cue the violins. The poor guy *strained his back* on a free amplifier that the rest of us would have to rob banks to afford. Smacks of "mine's bigger than yours," doesn't it? Like bragging, "I slept with Cindy Crawford last night, and boy am I sore!"

Well, here's a review of the *smallest* two-channel amp in the

Adcom line. An amp that, while very solidly built, can be carried under one arm, no sweat. With 50 watts per channel into 8 ohms (80 into 4), it's an amp that is sufficiently powerful to deliver a clean signal into most speakers in most listening rooms at any sane volume level.

There are just two things that could keep a true audiophile from taking this amp seriously: It's not big and it's not expensive. Significant drawbacks indeed! Bragging has to be restricted to something like: "I lived with it for months and my ears are just fine."

The GFA-5200 is built pretty much like the rest of the Adcom line of stereo power amps—just

scaled down a bit: Precision matched MOS-FETs are used for gain; a custom toroidal transformer and large filter caps (with 27,000 μF total capacitance in this case) provide the power; a simple circuit path with few gain stages and no coupling caps at the output keep the signal as un-messed-with as possible.

Because it's designed to provide high current for difficult speaker loads, the Adcom owner need not worry too much about the impedance of the partnering loudspeakers; the sensitivity of those speakers and the size of the listening room should be the only concerns. My room is fairly small—13x18 feet—but my speakers provided a tough test for the

littlest Adcom. Platinum Audio Reference-1s are rated at only about 83 or 84 dB sensitivity, so the Adcom's 50 watts didn't seem like it would be enough to let me get down and get funky with a heavily cranked up "Champagne Polka." However, a warning light on the front panel was there to let me know when the amp reached 1% distortion.

Another front panel warning light comes on when the amp goes into thermal protection (at 85°C). At the rear there's a fuse, a captive power cord with a two-prong plug, five-way binding posts for speaker connections, and a pair of RCA jacks for single-ended line-level input. Very basic.

The sensitivity spec of 0.71 volts for full (50 watt) output, along with an input impedance of 49.9 kilohms, suggests that a direct connection to a CD player with a volume control would not be out of the question. In my situation, the GFA-5200 worked wonderfully when driven directly by a Museatex/Meitner BiDAT processor, but it did require about 6 dB more gain than the Sonic Frontiers Power-2—which accepts a fully balanced input from either my BiDAT or my Line-3 preamp.

Little Big Man

Listening tests were done in two distinctly different ways. The first test was simply to plug it into my system and leave it there for a few weeks. This is a good way of determining whether slight flaws, little nitpicks that would be barely perceptible in an A/B comparison, go on to become glaring annoyances when you have to live with them.

I also did several level-matched (to within a quarter of a dB) shoot outs with a few other amps I like: Two "budget" amps that are significantly more powerful but also significantly more expensive (at \$1,000), and two somewhat more esoteric amps at about the \$5 grand price point. An old DBX analyzer was employed to match and check

This amp may be light in weight, but it sounds much stronger than its rated 50 watts indicates.

playback levels. My preferred listening level tended to always have peaks above 90 dB, but almost never above 100 dB at the listening seat (about 8 feet from the speakers).

A variety of recordings from all categories were used, but in the A/B comparisons I relied on: Chris Isaak's *Baja Sessions* (Reprise 9 46325-2); Diana Krall's *All For You and Love Scenes* (Impulse IMPD-182 and 233 respectively); *House on Fire Volume Two* (Red House RHR CD 100), and, at the eleventh hour, *Alto* by Joe Beck and Ali Ryerson (dmp CD-521), the first Super Bit Mapped release of a DSD master tape.

Let me first say that I never heard this little amp clip, and I never even saw the 1% distortion light come on. Thermal problems? Barely warm to the touch. Fact is, there are some famously difficult recordings with cannons and other percussive effects that can give a system fits, but most CDs of real music just don't require much juice from an amp. The Adcom's high current and 2.2-dB dynamic headroom (at 4 ohms) allow it

to sound more powerful than the 50/80 watts would indicate.

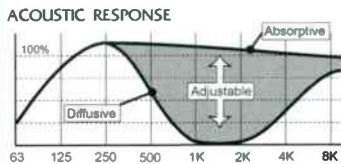
Let me next say that the GFA-5200 never disappointed on sonic grounds. The MOS-FETs kept things smooth and non-fatiguing, and the direct-coupled circuit did quite well in the areas of transparency, soundstaging and dynamics. I was flabbergasted at how good this baby sounded even in direct comparison to much more expensive amps.

With careful listening, an ever-so-slight touch of harshness can sometimes be heard on vocals, but sibilance is controlled nicely, and tonal balance seems perfect. This is such a nice amp that I'm going to hate myself for being tough on it—but, hey, it's my job, so let's get it over with. Relative to my \$1,000 Rotel amp, the Adcom gives up a touch of euphonic richness. Compared to the Amherst A-2000 (also \$1,000), the GFA-5200 lacks a bit of clarity and soundstaging prowess: Namely, the ability to throw the rear corners into 3-D relief.

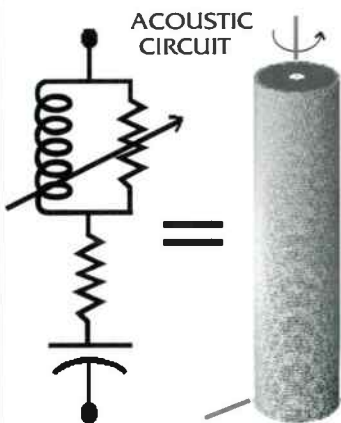
Put up (unfairly) against my \$5,000 reference amps from BAT and Sonic Frontiers, the Adcom can be heard to give up maybe an ounce of transparency and a tablespoon of dynamics. Harmonic overtones were very slightly curtailed, and a certain delicacy and purity of presentation heard from the BAT and SF amps couldn't quite be captured by the Adcom. Let me emphasize that these flaws are very minor; Adcom has basically got the recipe for good sound down to a "t." I've been loaned other solid-state amps that simply didn't light my fire (and I didn't waste my time reviewing them.) The little Adcom is something I didn't mind living with.

TUBE TRAP™

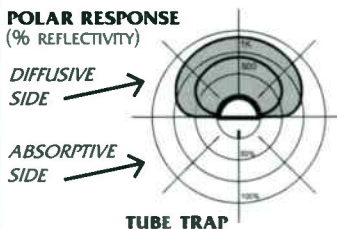
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This is an amp really worth building a starter system around. Money an issue? My recommendation would be to create a CD-only system by running a Discman's headphone output into the Adcom, then buying the best speakers you can afford with the money you have left (which, for my money, would be a pair of Platinum Solos). The first upgrade could be one of Meitner's BiDAT D-to-A's.

Putting the GFA-5200 into my multi-kilobuck system was

onds, and then paying \$100,000 for one that does it in 5 flat.

Taking the Adcom amp out of my system and returning to the Sonic Frontiers tubed beast, did, however, bring a sense of relief. The big-money monsters do offer a subtle sense of realism that make them worthwhile to me.

The audio skeptics who've been saying for years that properly designed amps (operating within their linear power range) all sound alike are wrong, but

I never heard this little amp clip nor saw the distortion light come on.

all-in-all a pretty shocking experience. We in the high-end tend to forget how diminishing the returns are in this area of audio. In the automotive world, it would be akin to having at your disposal a \$10,000 sports car that could do 0-60 in 5.5 sec-

they're not far wrong. Like wine and cigar aficionados, audiophiles are willing to pay big money for very small things. The Adcom GFA-5200 demonstrates that most of those small things don't have to come in big, expensive packages.

NOTES

Adcom GFA-5200 power amplifier, \$350. Adcom, 11 Elkins Road, East Brunswick, NJ 08816. Phone 908/390-1130; fax 908/390-9152; internet <http://www.adcom.com>.

Reference System

Sonic Frontiers SFD-2 MKII and Museatex/Meitner BiDat digital processors; Sonic Frontiers SFT-1 and JD Transforms transports; Well-Tempered Turntable and arm, Marigo Labs arm clamp and mat, Monster Cable Sigma 2000 cartridge; Sumiko phono amp; Sonic Frontiers Power-2, Balanced Audio Technology VK-500, Amherst A-2000 and Rotel RB-990BX amps; Sonic Frontiers Line 3 preamp; Platinum Audio Reference-1 speakers; Discovery Signature and Esoteric Audio Artus interconnects; Discovery and Esoteric Audio speaker wires; Bright Star Big Foot bases; ASC SuperTraps, tube traps, flat panels and RBG Skyline diffusors; Audio Quest, TDK and Radio Shack ferrite noise filters; Sims Navcom feet; AudioQuest UltraConnect cleaner; Nitty Gritty Model 2 record cleaner, DBX 14/10 analyzer.

Quintessence Acoustics Shadow Loudspeaker

Arnis Balgalvis



Here is a loudspeaker that stands tall and proud among the very best products that the high end has to offer. And the loudspeaker game is, as far as I'm concerned, the most heavily contested. I see the Shadow as a very bold statement in today's two-channel scene, showing how much is possible in getting a pair of speakers to really sing, despite the constraints of multiple cabinet-mounted dynamic drivers. I am very taken by its astounding sonic capabilities, the elegant presence of the final design, and by the substantial construction techniques incorporated here. At Quintessence's \$19,500 asking price, it better be good. I'm here to tell you that it is.

Just what is it that makes me so sure? Very thorough research. I have

traveled far and wide to hear this speaker under a number of very different conditions. On this quest, literally involving coast-to-coast distances, I auditioned the Shadows at the '97 WCES in Vegas, at the studio of Quintessence Acoustics' Tom Campagna near San Diego, at the home of fellow Audiophile Society member Bill Brassington, and, of course, in my own listening room. Since I was potentially going to suggest that someone seriously consider spending \$19,500 for a pair of speakers, I wanted to be on the safe side of the situation.

I was willing to invest this level of time and energy for another very good reason. I am not very enamored of reviewers who set up loudspeakers only in their "revered listening rooms" and proceed to draw "infallible" conclusions. I'm sorry, but that's not good enough for me. To be sure, there are a couple of instances I can think of where the reviewer's listening environment is way above average. David Robinson and Tom Norton, who are both in the magazine reviewer business, have custom-designed, dedicated listening rooms, and Shannon Dickson is in the process of doing something very similar. I'm sure there are others. But in general, the perception of the myth about audio that the reviewer's listening habitat is somehow blessed by the Audio Gods is way out of touch with reality.

The biggest disservice to the industry are a reviewer's negative comments generated under these ego-centric conditions. Not only are the readers misled, but a number of very fine speaker designers have had to endure economic hardship, while others have been put out of business altogether.

As far as the Quintessence Shadows are concerned, I am confident that they were evaluated under a wide variety of conditions, situations seldom encountered in a review. The four environments I was able to use were as different as could be hoped for. Even in my own listening lair, I position speakers in for review in two very different locations. I do this because my normal listening position does not allow most speakers to display all they are capable in the lowest lows. Hence position number two, where I get bass galore but the imaging and staging suffer.

Included in this investigation was a wide variety of equipment as well. Let me just summarize by saying that tubes and solid state as well as digital and vinyl were involved, and refer you to the "Notes" sidebar. If you are wondering why I have included the '97 WCES as an experience of significance, let me just point

out that the sound at the Quintessence room was one of the highlights of the show. How much so? So much so that Steve Bednarski of Balanced Audio Technology was heard a number of times telling people to go listen to The Shadows in the Quintessence room. And that's with Steve knowing that they were driven by Convergent Audio Technology tube gear. The sound in that room was that outstanding, and the incident also shows what type of individual Steve is. By the way, this kind of congeniality has greatly diminished in the high end over the last few years, a situation which takes a heavy toll on the community aspect of this beloved hobby of ours

The Product

Unless the room is really prodigious, the Shadows are sure to assert themselves with a pre-eminent presence. Each Shadow features a total of eight drivers, and Quintessence rates then at 94.5 dB SPL efficiency (one watt/one meter). They stand 63 inches tall, have a 17½-inch wide by 22-inch deep footprint at the bottom, and end up 10 inches wide by 6 inches deep at the top. The system consists of two parts, a woofer section and a mid-range/tweeter section. The woofer portion contains two drivers, an 11-inch unit in a ported enclosure and a 9-inch driver in a sealed box. This section is basically a truncated pyramid with sloping sides and front, but the rear surface is vertical. The bottom dimensions are as I mentioned earlier,

while the top of this woofer portion has a surface that is 12 inches wide and 14 inches deep.

The mid/tweeter enclosure sits on top of the woofer section and is held in place by two ¼x20 bolts accessed in a recessed opening on the rear of the unit. A critically time-aligned phased array with a total of five drivers per side is incorporated; the centrally placed ribbon super-tweeter is flanked vertically by a pair of tweeters, which in turn are next to the two mid-range drivers.

The drivers are positioned to form an arc where the focus is intended to be located at the listener's ear position. Having a 10-inch-wide by 13-inch-deep footprint, this section extends upward for 18

inches, where the front takes a bend forward at an angle of roughly 15 degrees. This brings the midrange and tweeter drivers situated at the top closer to the plane of the lower midrange and tweeter in order to avoid

interference problems at the listening position. If you look closely, you will see the lower mid driver and tweeter mounted on a slightly sloping surface also.

Yet another tweeter, the sixth driver per side, is mounted on a sloping surface at the top-rear of the mid/tweeter section and is angled to fire up and behind of the cabinet. From there, the back of the tweeter/midrange enclosure is flat and vertical, lining up nicely with the rear surface of the woofer. Both the super-tweeter and the rear-firing tweeter have controls to adjust the level, and you can silence the rear-firing unit entirely. The system is intended to be bi-wired, as each section has a set of binding posts.

There are several examples of attention to very fine detail by the maker. Examination shows that the mid/high crossover is located in the rear and half-way up the enclosure. This central placement is deliberate to keep the lengths of wire to the flanking mid-range and tweeter drivers equal. Tom is also convinced that even small vibration irregularities can alter the sound of a transducer, so he goes to great lengths to isolate and damp critical components. The crossover, which is isolated by 1½-inch thick damping materials from disturbances by cabinet vibration, has additional pieces of damping material at critical spots on the circuit board.

Besides utilizing a few crossover techniques that he was not willing to reveal, Tom was

**I am very much taken by
the Shadow's astounding
sonic capabilities.**

emphatic about putting to good use some parallel trap circuitry. This topology goes a long way towards reducing resonant ringing points, especially in the tweeters. And speaking of tweeters, let me point out that each tweeter is rebuilt completely even though it is a very fine Focal design. Quintessence feels that the tweeter frame has to be replaced with one manufactured from their proprietary inert material, again to keep resonances down.

Did I say keep resonances down? Cabinet vibration, I'm sure, is at the top of their sonic enemy list. Quintessence incorporates three-dimensional bracing that sends reinforcements in every conceivable direction inside each enclosure. That's why the woofer section has

walls as thick as 4 inches in some sections and yet the Shadows do not have the appearance of being heavy.

But think again. Unless the dealer delivers the Shadows, be prepared for a heavy-duty work-out in setting them up: These speakers weigh 210 pounds per side. Fortunately, each speaker is made up of two sections, which greatly simplifies movement and assembly. In my case, I was able to put the pieces together by myself, after the ordeal of getting all the boxed pieces down the stairs into my basement listening area.

I must single out the appearance of the Shadows as one of the most aesthetically pleasing designs in the vast world of loudspeakers.

Delivered in piano black, with black speaker grilles to match, the presence of these speakers is one of unmitigated elegance. The Shadows have

generated many oohs and ahhs for their looks alone from everyone who has visited my listening room, justifying Tom's efforts to make these speakers user friendly on a sum-total basis. An interesting visual touch is discovered at the rear of the mid/tweeter section. Even though the crossover components for the mid/tweeter section are mounted in a recess on the rear surface, Tom has chosen to display them by providing transparent covers for the crossovers.

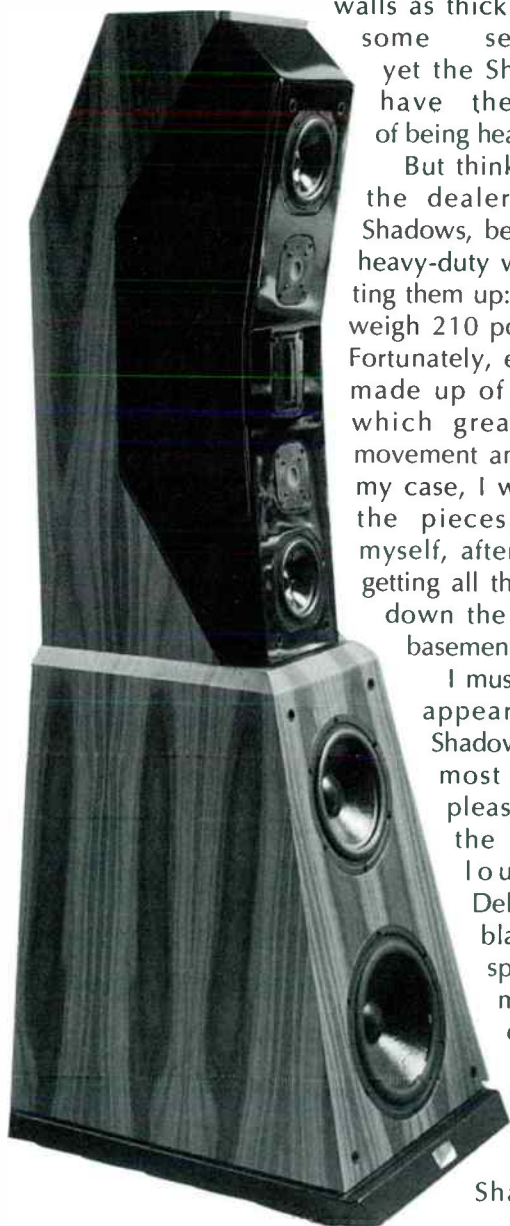
It should be pointed out that the version that I reviewed and what Quintessence is now shipping has been changed to make it more versatile to set up, Tom Campagna tells me. The 9-inch woofer is now also port loaded, instead of residing in a closed enclosure. However, they do supply a plug for sealing the port and returning it to the state of the speaker I now have. According to Campagna, the above option was added to increase the bass output in the 30- to 90-Hz region in recognition of the wide variety of listening environments likely to be encountered by any loudspeaker. Time constraints did not permit me to have the speakers I reviewed modified, but I will keep you updated as soon as it happens. Having said that, I hope you do not dismiss this review as yet another work-in-progress situation. That's not the case. This speaker has so many positives going for it that it would be you, dear reader, who would be short-changed if you did so.

The Firm

Why do I bother with a company that is not a household name, that is not widely distributed at least in US of A, and whose dealer count is not quite up to the magic number of five? It's because they, like a number of other companies, deserve a chance. How do you get work experience without a first job? Quintessence is fast out of the starting blocks, at least in the Far East, and I know full well why they deserve a break. It's their marvelous sound. I hope this review will get them the attention they need.

According to Tom, Quintessence Acoustics is here for the duration. And just who is this Tom to make such a statement? He's an extremely dedicated audiophile who, after many years of listening and talking about it, decided to stop talking and do something concrete.

Don't get the idea that this is some brand-new upstart outfit. On the contrary. They set up shop in 1992, and Quintessence has been making serious waves for a number of years with their flagship model, The Stealth. Sporting a cool \$55,000 price



tag, Tom's been finding buyers for these beauties in the Orient for more than three years. Now, in addition to The Stealth, Tom is also shipping the \$12,000 Studio, which was previewed at Hi-Fi '97 in San Francisco, and, of course, The Shadows.

Campagna is not into this by himself. He has had the good sense to work with an established industry resource in the form of Peter Noerbaek, who heads up PBN Audio in the capacity of Chief Engineer. PBN is an "OEM" firm specializing in speaker manufacture. Peter has designed some very well-received products himself with the XP (\$15,000) and the SP (\$3,500) models. PBN Audio also builds speakers for other firms such as Cary Audio, Soloquily, and others. At the present time, Quintessence and Noerbaek share joint design responsibilities for the Shadow and a new product, the Summit. Peter has been concentrating on the crossover design effort, though with some input from Tom also, while Campagna did the aesthetic design, driver complement, crossover parts selection, and the final voicing.

On my visit to Quintessence Acoustics' studio in San Diego, I was able to hear a nearly finished prototype speaker system of Quintessence's next project. Named appropriately The Summit, this speaker was awesome. In appearance, it is a scaled-up version of the Shadow, but sonically it was far more than just "scaled up." The Summit is Tom's new statement, and it will start in the "around forty" kilo-buck area. When finished, he intends to have crossovers in the digital domain as well as incorporating many other very exciting technical highlights which he asked me to keep under my hat. The final pricing will be commensurate, let me assure you.

The Sound of The Shadow

The Buddhists contemplate the sound of one hand clapping, while Simon and Garfunkle sang

about "The Sounds of Silence." Here I was faced with the sounds of The Shadow.

It is one thing to hear something at a show and another to live with a product. When it became apparent that I would be reviewing the Shadows I had mixed feelings. To be honest, I had an attitude. I mean, just how much better could these \$19,500 speakers be than, say, the \$3,500 Paragon Regents or the similarly priced Sony SS-M9s? Of course, the Shadows would be better, but to what degree? Just how much room for improvement is there? Well, let me tell you I was in for a BIG surprise!

It seemed obvious the Shadows would be able to play loudly, what with all the drivers used in this speaker. And this they did. What caught me off guard was the quality of loud, clean sound that was now possible. The dynamic contrasts now revealed were simply stunning. And this does not only apply to violent sounds, such as rim shots. No, the resolution was present across the board. Bowed violins, voices, plucked instruments, be they

guitars or lutes; you name it, everything was cleaner, clearer, better resolved and revealed. As a result, the presentation was more enjoyable, involving, and thrilling.

But this speaker is not only about loud. The single most pleasant surprise was the transparency. This is one speaker that does not take a back seat to any other, The Shadows are in the driver's seat! Urged on by something very transparent to begin with, like the Krell FPB-600 with TARA Labs' Decade or Purist Audio's Dominus cables, there was a see-through quality unprecedented in my listening room. It was thrilling and mesmerizing. The presentation was much more accessible, now that a number of significant layers of grundle were very apparently just not there to obscure the finer points of the sonic scene. More masking components were out of the way, and this allowed finer points of the musical event to be revealed.



NOTES

For example, hearing the JVC's XRCD CDs became a much more dramatic experience because the advantages of this very refined process were revealed more clearly. It was also exciting to revisit some older yet beloved CDs. The true worth of an improvement can best be assessed by playing a favorite disc that has not been heard for some time, say a few months. This is a case where familiarity breeds contentment. Well, The Shadows were overwhelming in this regard. Not only was there new information revealed, but the incremental improvements in many areas could now be heard, presented in a manner that had a sense of fitting together, a feeling of being comfortable. Palpable and pleasant, yes. But it was more than that.

And that's because there was a second truly outstanding performance parameter appearing in the form of imaging. I am really at a loss for words to describe what The Shadows can do in throwing up what seems like a hovering cloud of spatiality, and yet without sacrificing pinpoint imaging within this vast soundstage. What abounded was a profusion of detail aglow with sonic presence.

There was many a time when I would be shocked to realize that this was, after all, a design utilizing eight drivers per side. To say that the drivers blended very well is not enough. There was no such thing as hearing crossover points. This was acoustic synergy at its best. The speaker behaved as one large instrument filling the room

The Shadow is capable of state-of-the-art replication; it can make your hair stand on end.

with a seamless spectral and spatial presentation dazzling the senses with an impression that is very credible and, for me, indelible.

Image stability, focus, and subtle spatial cues appear with the precision of a mini-monitor, but without constriction of dynamics or low-frequency performance. The Shadows excelled in a most

Quintessence Shadow Loudspeaker System, \$19,500.00.
Quintessence Acoustics, 1631 La Mesa Ave., Spring Valley, CA 92977; phone 619/698-6015, fax 619/698-3827.

Associated Components

Basis Gold Standard Debut turntable; Air Tangent tonearm; Clearaudio Accurate cartridge; Krell Reference phono stage and power supply; Jeff Rowland Design Group Synergy preamp; Mark Levinson No. 37 and Wadia Model 7 CD transports; Museatex BIDAT and Wadia 27 D/A converters; Townshend Seismic Sink; Tara Labs Decade and Purist Audio Dominus cables, and Paragon Regent, Celestion SL-600, Platinum Reference 1, Gershman Avant Garde, and Sony SS-M9 speakers.

remarkable fashion at implying the weight and power of some large sound source, such as a full orchestra or a big band. Fortunately, listening to solo instruments and voices did not give the impression of exaggerated size or proportion.

Call it palpable, pleasant, or plausible. Maybe alluring, articulate, or captivating. But this speaker is more than that. It really has something else going for it.

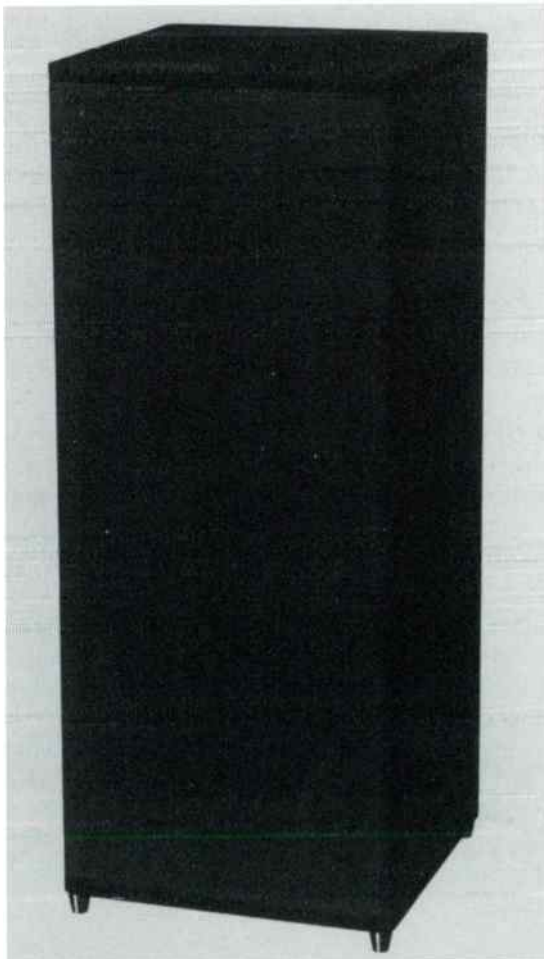
This characteristic had to do with big picture aspects that melded in a way unique to The Shadows. Like the replication of dynamics, the even spectral balance, the transparency, the low coloration, the combination of imaging and spatiality. Some refer to this as voicing but that term implies an assignment of a personality. I am talking about something at the opposite end of scale from that. This is a neutrality and sublimation of character that appeared to be an active ingredient, a tactile unity that ingratiated itself to me wholeheartedly.

What I am talking about is state-of-the-art replication of reproduced sound, a sound that, within this context and under the right circumstances, will make your hair stand on end. Or tickle your fancy in some other equally thrilling manner. Few speakers have the capacity to provide the listener with such a rewarding bounty of sonic pleasure, and yet that is exactly what the Shadows have managed to deliver to me consistently and convincingly. Give Quintessence a call, and see what can be arranged; ask Campagna about their new 30-day home trial program.

You just might end up as overwhelmed as I am. And as satisfied. These are my new reference speakers.

Acoustic Sciences Tube Trap

Ralph Glasgal
Ambiophonics Institute
www.ambiophonics.org



Acoustic Sciences Corp. (ASC) is boldly going where few have ventured before. Their new Cube Trap doesn't need any installation to write of and looks just like any other floor-standing loudspeaker. They have responded to the consummate marketplace cynicism created by the deplorable fact that, even among knowing audiophiles, interior decorating considerations outweigh science-based acoustic reality. The Cube Trap sells for \$698 a pair, and is a speaker-like black enclosure (14½ x 14½ x 38 inches high) with a black grille cloth that goes completely around the box. The top is solid so you can put a statue of the Venus di Milo or your power conditioner on it.

While diehards, for whom any suggestion of listening room acoustic treatment is anathema, still represent a majority of audiophiles and hi-fi magazine columnists, their resolve is weakening. This is especially true as it becomes clearer that automated, digital, electronic room sound conditioners are not only expensive, but in mathematical theory cannot do the job even half as well as they need to. (Basic Designer Conundrum: You can't boost a null-causing reflection if the computer microphone can't

detect it.) Furthermore, the proliferation of passive low-cost room treatment products from companies like Acoustic Sciences Corp., Echo-Busters, RPG, and Armstrong now make taming a home listening room's erratic acoustic behavior a quite reasonable proposition.

Historically, the major objections to room treatment were the building trade-like installation hassle and aesthetic considerations. All those pictures of padded cell-like anechoic chambers in our science text books prejudiced audiophiles almost beyond repair.

Deja Tube All Over Again

ASC is, of course, the maker of the very popular line of Tube Traps that are used to control the ambient sound quality of rooms at audio shows, in stores, recording studios and, of course, home listening rooms. High-enders who attend audio shows regularly have seen more than a few manufacturers' demo rooms festooned with several tube traps, sometimes even more than a dozen in a large room. The reason these tubes are used in quantity is that absorption is proportional to area (and in the bass region, tube volume). So it takes a fair number of tubes, or panels for that matter, to reduce bothersome reflections and the reverberation time of an excessively live space to levels that will make a demo sound good.

But why have a free-standing unit instead of something you hang on the wall? Well, the absorption of a free-standing square box is roughly four times that of a flat wall panel. These Cube Traps absorb about 15 Sabins from 500 Hz on up, though following the Laws of Physics, decline rapidly in absorption effectiveness as the

frequency declines. [Editor's Note: 500 Hz is roughly in the middle of spoken or sung frequencies, though the ear is most sensitive at about 3,000 Hz. Gene Pitts] This absorption characteristic holds for most devices that are not resonant cavities. Deep bass is always hard to fully control, but difficulties in this area are usually less

audible than untamed mid or high frequencies.

My measurements confirmed that these boxes are very effective absorbers of acoustic energy above 500 Hz. But since they are only 14½ inches square, unless you put your test probe right at their surface, you will be measuring the mid-frequency diffraction around the sides,

The new Ohm Walsh 300 Mk-2s were reviewed by James T. Frane in the audiophile voice. Here's what he said:

"Perhaps the most impressive characteristic of these speakers is that they produce very deep bass without boosting the mid- to upper-bass frequencies... I measured output at 25 Hz within 1 dB of the 1-kHz output in my room, with very little variation between!

"The 300s displayed excellent dynamics; a case in point was Tchaikovsky's "1812 Overture"... cannon had a sonic impact with no apparent distortion although the amplifier meters were registering past the 400 watt/channel marks.

"The 300s recreated an extremely involving orchestral spread... The placement of the instrumental sections was correct and the balance of frequencies was very good. The 300s did not call attention to themselves as specific sound sources, but evenly distributed the sound across the space between them.

"The sound of 'I'm Confessin'" from *Jazz at the Pawnshop* (Prophone PRCD 7778) was as if I was looking through a wide doorway, defined by the width of the speakers, into the performance space. The ambience and the sense of the room size were marvelous. The vibes seemed just a few feet away. Janis Joplin's soulful voice and her marvelous back-up instruments and singers were only a few yards in front of me.

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rather than absorption. Their relatively small size does suggest that for best use, they should be placed quite close to the listening position. The manufacturer claims that the Cube Trap is also diffusive at higher frequencies, but I was unable to confirm this effect with the instrumentation at hand or by ear.

Stonehenge And Straight Stereo

For best results, these boxes should be used free standing or at least a few inches away from walls. Since it often takes hundreds of Sabins of absorption to do a good job in an average room, using just one pair of these Cubes or their brother Tube Traps is unlikely to do it for you. Again, they work best as close to the listening position as possible. So imagine that you have four of these. If you place

one directly behind the listening position, one to the left, one to the right, and one directly in front of you and then huddle inside this ASC enclosure, you can probably create a reasonable space that is free of many, if not most, irksome room reflections. Unfortunately, sitting inside such a Cubed Stonehenge is not going to be everyone's cup of tea; you know, the Wife Acceptance Factor. So, even if installation of this room treatment is easy and fairly cheap, we are back to square one if we are also trying to reconcile room decor with sonic reality. Cube Traps are also effective when used to cancel stereo crosstalk (Straight-Stereo) by placing one cube on a one-foot pedestal (to make foot room) and then sitting close enough behind it so that the front speakers' outer edges are only half visible.

All in all, ASC's Cube Trap is a moderately sized and priced room treatment, which goes well with panels one better due to its free-standing nature. It can be placed where needed or where possible, and allows the user some control over both his acoustics and his decor.

Notes


Cube Trap bass trap, \$698.00 per pair. Acoustic Sciences Corp., P.O. Box 1189, Eugene, OR 97440; phone 541/343-9727; FAX 541/343-9245; website www.tubetrap.com.

Associated Equipment

Sunfire amplifier, PS Audio Lambda CD transport and Audio Alchemy DDE V3.0 D/A converter, Duntech Sovereign speakers; Gold Line 30M sound level meter, and Heath AD-1309 pink noise generator.

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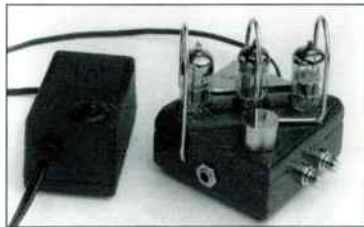


Are we entering a new era of high-end digital players or is the market witnessing a trend away from separate processors and transports? Perhaps the slow rush of DVD technology as a possible/probable replacement for the current CD standard has prompted high-end manufacturers to offer high quality digital *players* to fill the gap. The major digital manufacturers, Madrigal, Wadia, Krell and Theta, among others, now offer a compact disc player to complement their "all-out" separates. Indeed, Madrigal offers two CD players, the Proceed CDP in a rather "plain brown wrapper" and the Mark Levinson No. 39 in a simple but impressive case that bespeaks its high-end lineage.

But don't let the Proceed's "wrapper" fool you; this is a serious machine, serious not only in its circuit design but also in its impressive sonic qualities.

Madrigal Audio Laboratories is located a Middletown, a quiet, old New England town in central Connecticut. Plans were already in place to review the Proceed CDP when I called David Nauber, Madrigal's Director, North American Sales, to suggest that I stop by and pick it up. David took the occasion to give me a tour of the 61,000 square foot facility. The tour lasted most of the afternoon. Now part of the Harmon group, Madrigal employs 200 people to develop, design and manufacture amplifiers and preamps as well as

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digital and home theater equipment. The company is best known for its Mark Levinson products. The Proceed line is a recent addition (1989) to its stable of products. With annual sales approaching \$23 million, Madrigal is one of the four or five most successful high-end audio manufacturers in the U.S. Its U.S./international sales ratio is two to three.

It takes seven hours of labor and testing to build a CDP. During final development, Madrigal submits the prototype to a listening panel where components are substituted without regard for price. Whichever resistor, capacitor, etc. sounds the best becomes part of the circuit. This is true for the Proceed CDP processor as it is for every other-product of theirs.

The Proceed, in my opinion, is one of the most versatile of players.

During the tour around this modern plant, I had the opportunity to observe the fabrication of each product. The operation sports some very sophisticated machinery and equipment e.g. as an employee installed a component on the p.c. board, a computer monitor displayed a picture of the component, then the computer checked to see if the installed component was correct. It was most impressive to witness the combination of hand assembly and the use of high-tech machines each at the most significant stages of construction. There is a sense of pride displayed in the manufacture of every product from the least expensive to Madrigal's \$33,000 amplifier.

Technical Considerations

Madrigal's design objective for the Proceed CDP was to achieve as closely as possible the performance standards of the separate Proceed CDD transport and DAP D/A processor by eliminating interfaces and effecting electric and electronic isolation.

When it comes to flexibility and features, the Proceed cedes nothing to Sony, Denon, etc. In my experience, it is the most versatile of players. It has both fixed and variable outputs - software selected, fully balanced or single ended stereo. Maximum output is from 2 volts to 8 volts depending on whether the output is fixed or variable, and balanced or single-ended mode. In the variable mode, volume and balance are controlled (from -116dB to 0dB) from the remote. The Proceed is a CD player that can directly drive an amplifier. Madrigal claims a unique design feature that minimizes bit loss with the volume control in the digital domain. If there is any noticeable loss in frequency extension, it is not easily recognized. In fairness to Madrigal, they clearly state, "This mode of operation is somewhat less desirable sonically than using a high-quality active preamplifier, but may be advantageous under some circumstances."

Let me say that the advantage of directly driving the amplifier

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is not insignificant. It eliminates a whole amplification stage between the source and the amplifier. The preamplifier is not, after all, a straight wire with gain.

The Proceed CDP with 24 bit digital architecture and HDCD compatibility uses two (Burr Brown 1702) opposing polarity, 18 bit, 8x oversampling converters per channel for conversion to analogue. It employs a proprietary, closed loop, jitter reduction system together with a Philips CDM12 Industrial, double speed CD-ROM drive. The custom made crystal oscillator is placed immediately prior to the digital to analogue converters, remote from the transport motor and its noisy electrical environment, thus, according to Madrigal, "...the signal presented to the outputs of the CDP is virtually uncontaminated by jitter." Madrigal also claims that its digital servo control, exclusively in the digital domain, never needs adjustment under normal conditions.

The transport loading mechanism, a unique slim 1/8-inch drawer machined from a solid piece of aluminum, operates effortlessly. The player has two digital inputs incorporating Toslink optical and S/P DIF RCA interfaces. Digital output is via an S/P DIF RCA connector for use with an output digital processor or digital recorder and benefits from the transports closed-loop jitter reduction circuitry.

Functions

The simplicity of the remote belies the extended functions available. Rather than list all of the capabilities, let me note some unusual ones. The pause button has an extended pause feature that stops the disk and turns off the laser but will return

you to the spot where you left off listening. "Polarity" permits you to change phase from your favorite chair, the only acceptable way of making a change. The "Program +" and "Program -" have several functions basically allowing the user to customize three options: the volume control circuitry; a user-definable mute level; and an auto-standby function. "Program -" allows you to delete a track/s when programming. Besides the usual "repeat" functions, there is an "A-B repeat" that allows you to repeat a specific phrase or passage. "Direct Time Access" permits you to access a specific time within a track with the "Time" and "Play" buttons.

Sound Considerations

My reference system for this review included Purest Audio's Quartessence speakers, Sunfire sub-woofers and KR Enterprise (Vaic) 52BX SE monoblock amplifiers. Brief comparisons were made with other equipment: Balanced Audio Technology amps; ESP Harp and Quintessence Shadow speakers; etc.

I was unprepared for the bass kick this player produced from Shostakovich's Symphony no. 1 with Leonard Bernstein conducting the Chicago Symphony (DG 427 632-2). There is some powerful bass on this CD that I had not previously heard reproduced with such impact. CD after CD convinced me of the authority with which bass and dynamics are reproduced through the CDP. Try the first and third tracks of *New England Triptych* by William Schuman (*An American Tapestry, Dorian DOR-90224*) and the second cut, "Sophisticated Lady", with The 20th Concord Festival All-Stars, on Concord CCD 4366. I've heard the acoustic bass (played by Edgar Meyer) on track one of *Skip, Hop & Wobble* (Sugar Hill, SH-CD-3817) sound mushy and somewhat overmodulated with some processors. But not in this instance; bass was better defined, balanced and in focus.

"You're Driving Me Crazy", on Reference Recordings' *From the Age of Swing* (RR-59CD), kept me involved, foot tapping (shades of Tifenbrun) through-

NOTES

Proceed CDP Compact Disc Processor, \$3,500.00. Madrigal Audio Laboratories, 2081 So. Main St., Middletown, CT 06457; phone 860/346-0896; fax 860/346-1540.

Associated Components

Altis Reference Tube Digital Audio Processor and CDT III CD Transport, Balanced Audio Technology VK-P10 phono stage, KR Enterprise (VAIC) High-End Model 52BX (SE) and Model 30B monoblock amplifiers, Purist Quartessence speaker, Croft OLL monoblock amplifiers, Croft dual-mono preamp, Placette preamp, Linn-Sondek LP 12 turntable, Lingo, Itok tonearm (with Mod Squad modification), Lyra Clavis Da Capo MC cartridge, Revox B77 tape recorder, Kenwood KT-917 tuner, Nakamichi 582 cassette deck, Purist Maximus and HDI interconnects, Purist Digital Link, and Purist speaker cables, Discovery interconnects; Black Diamond Racing cones, etc.

out. Transparency and detail, depth and image perspective were splendidly reproduced. The beginning of track two on *Live From Studio A* (Chesky JD1) is a good test of a wide stereo stage. Instruments were spread across the stage and beyond the edges of the speakers. No doubt about transient response on "Barcelona Nights" from *Nouveau Flamenco* with the Spanish Gypsy guitar played by Ottmar Liebert (Higher Octave Music, HOMCD 7026), there was excellent attack with no apparent rounding of the leading edge of transients. Ottmar Liebert, together with other members of his quartet, play some rather infectious contemporary flamenco, a CD worth hearing, particularly when reproduced by an excellent player such as the Proceed.

For sheer dynamics there is probably no more demanding a track than "Die Frist ist um" from *Der fliegende Hollander* of Richard Wagner with the powerful bass-baritone voice of Bryn Terfel and the Metropolitan Opera Orchestra conducted by James Levine (DG 445 866-2). These are complex sonics that test the entire reproduction chain.

Neither the preamp, amplifier nor speakers failed to reproduce what the Proceed delivered: All the character and nuances of Terfel's voice together with the entire orchestra playing at fortissimo levels. A spine tingling, palpable performance. Not a trace of grain, compression, hash or distortion artifacts were heard.

Conclusion

The Proceed is a CD player that does everything right. It equals some players and separates that are much more expen-

sive and betters anything I have heard in its price range. At the moderate price of \$3,500 (for a high-end product), the Proceed CDP is arguably the best (price-wise) you can buy whether separates or player. With DVD CD at least two years or more away, this is a purchase you would not regret.

Recently, I heard a manufacturer comment that the high-end audiophile is not concerned with a multitude of convenient features; it's the quality of the sound that is of foremost concern to this group. No, you're not going to choose this CDP player simply because it's so damn loaded with useful functions. But couple the extensive user flexibility of the Proceed with its outstanding sonic qualities, all at a modest price for an advanced design from Madrigal, one of the most respected high-end manufacturers in the world, and you have a beautifully engineered digital player that demands consideration.

Post Script

I had already completed the extensive evaluation of the Proceed when the manufacturer KR Enterprise High-End stopped by to introduce a stereo amplifier built around an entirely new and revolutionary device dubbed a "vacuum transistor." I invited several audiophile friends and reviewers for the occasion.

The Proceed was used for the CD source in fixed-output mode with the preamp and in variable-output mode directly into the 300 watt "vacuum transistor" amplifier.

Everyone seemed to prefer the variable-output connection. The oft-heard comment that evening was "That's one helluva CD player".

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Home Theater, Feb, 97

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The Sensible Sound, Issue # 60

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—Julian Hirsch

Stereo Review, Dec. 96

**Strictly speaking: for 20
years until patent expires.*



<http://www.sunfirelabs.com>

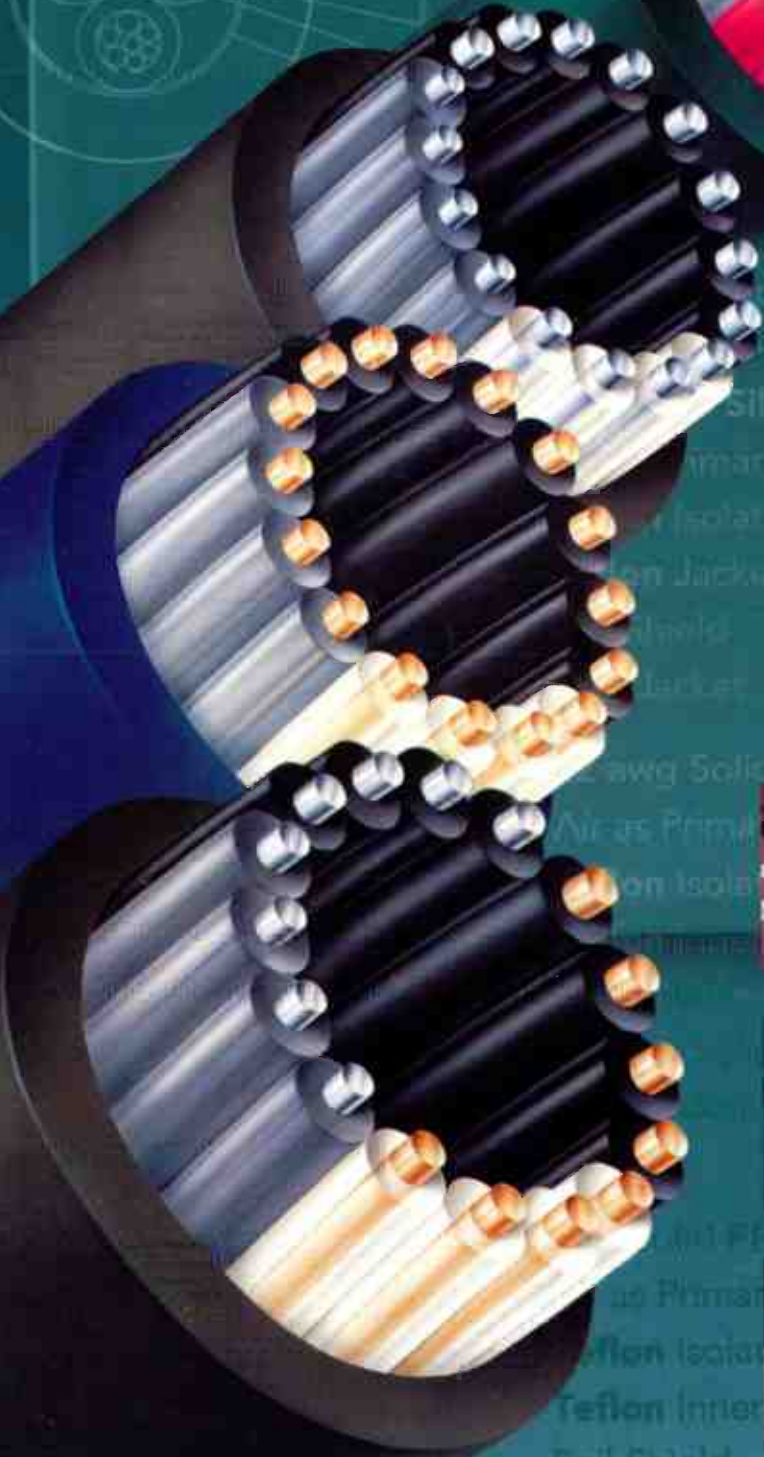
Bob Carver's
Sunfire
from his mind ... and soul

DIAMOND x 3



22 awg Solid

19 awg



LGC Copper Drainwire

24-26 awg

Silver Conductors

Primary Insulation (P)

Insulating Rods

Con Jacket

Welds

Markers

22 awg Solid FHS Silver Conductors

Nears Prim

on Isol



22 awg Solid FHS Copper Conductors

Primary

Insulation

Teflon Inter

Foil Shield



audioTRUTH

World Radio History

World Radio History