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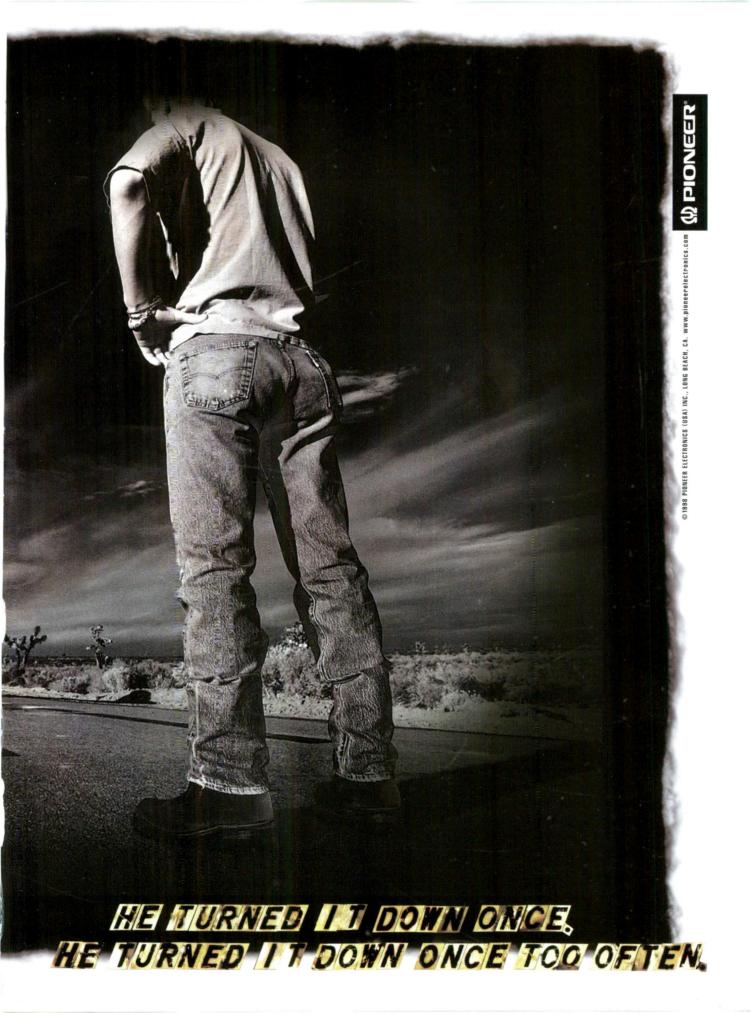
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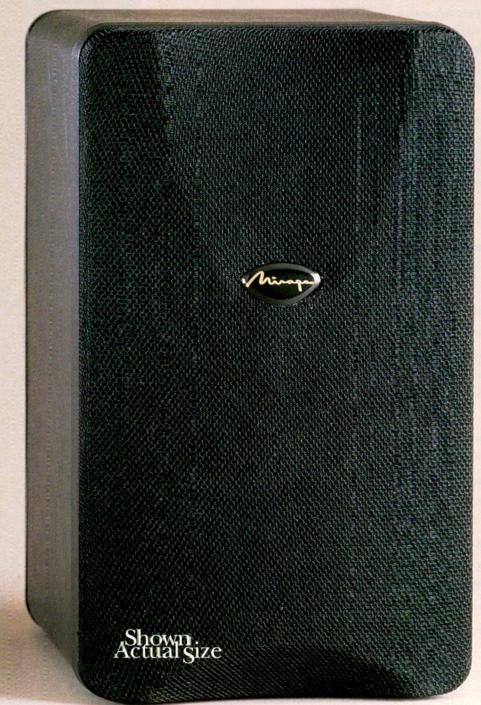
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DECEMBER 1998



ON THE COVER

Get ready for digital TV (see page 60) with a widescreen DTV set like the 61-inch ProScan PS6100, shown here with Legacy Accent left/right front speakers (see page 41) and a Legacy Cinema III center speaker. (Screen images from 2001, MGM Home Video.)

> Photograph by Dave Slagle



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Stereo Review

60 The Dawn of Digital TV The journey to DTV has come to an end — but the odyssey has just begun BY KEN C. POHLMANN **73** Reviewer's Choice Our equipment reviewers pick their favorites from the past year's crop







DEPARTMENTS AND COLUMNS

RANDOM PLAY	8
LETTERS	11
NEW PRODUCTS	15
HOT DVDs	22
AUDIO Q&A	25
DIGITAL HORIZONS	26
HOME THEATER	27
POPULAR MUSIC	87
CLASSICAL MUSIC	98
ANNUAL EDITORIAL INDEX	108
THE HIGH END	116



79 Stocking Stuffers

How to make anyone who likes electronic gadgets happy this holiday season BY TERI SCADUTO



83 Box Your Ears!

So which CD boxed sets are you gonna give — or get? BY KEN RICHARDSON & ROBERT RIPPS

EQUIPMENT REPORTS

Kenwood VR-2080 Dolby Digital/DTS receiver	31
Marantz DR700 CD-R/RW recorder	38
Legacy Accent speaker	41
FIRST TEST! Onkyo TX-DS555 Dolby Digital	
receiver	46
Teac H-500 Reference minicomponent system	56



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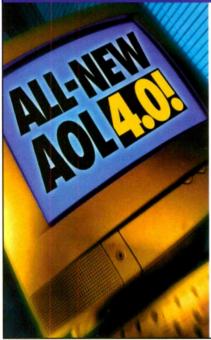


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Divx Update: The Rollout Continues

One month into the national introduction of Divx, players are available from Zenith, RCA, and ProScan, a DTS-compatible RCA model is due soon, and a Panasonic model is due by the end of the year. There are almost 250 pay-per-view titles available, with Divx promising to add 40 to 50 titles a month. To support the rollout, Divx has launched a huge marketing blitz, with national TV ads popping up everywhere. The launch seems to be going well, but there are still some hard questions to be answered: Will people pay \$150 more for Divx when the entry price for regular DVD players hits \$299 by holiday time? Will 250 titles be enough when the number of regular DVD titles is rising into the thousands? And will people find it more convenient to drive to their local malls to get new Divx discs when there's a Blockbuster just down the street with DVDs that are cheaper to rent? Stay tuned. — Michael Gaughn

Ready for DTV?

November marked the official rollout of digital television (see "The Dawn of DTV," page 60, and "What's on Tonight?," page 67), but as we went to press, there were still plenty of points needing to be settled. At the Digital Television Conference held for financial analysts in New York in September, we discovered that the reality is far less than the hype.

For example, according to Nat Ostroff, the VP of new technology for the Sinclair Broadcast Group, which owns 64



stations across the U.S., highdefinition (HDTV) presents an extroadinary challenge to the broadcast industry — an industry, he noted, that is not used to change. "Reception [of a DTV signal] via an antenna is not assured," he said, claiming that the FCC coverage calculations and projections ignore the effects of multipath (where direct signals arrive at the antenna along with signals reflected from buildings or mountains). Adding that "bits are bucks," he said that Sinclair won't do any HDTV broadcasting anytime soon.

"Any screen less than 40 inches wide can't show the advantages of HDTV to most people," he said. "Transmitting bits that can't be seen makes no sense." And despite DTV's ability to deliver 5.1-channel Dolby Digital surround sound, you won't hear it during the rollout. "The AC-3 infrastructure

is not ready," according to Robert Turner, engi-

neering VP of Belo Corp., which owns 17 stations. "Dolby Pro Logic will be used as a stopgap." He added, however, that Belo is committed to HDTV, noting that no one will buy the new sets without seeing the best the medium can offer. Belo's WFAA in Dallas already has two clients itching to run commercials in high-def.

Despite the steep price tags, the public seems to be excited by HDTV technology. A Panasonic spokesperson said that 16,000 people stopped by to look at a two-day HDTV demonstration in San Diego, though a marketing VP for Best Buy stores noted a less dramatic turnout of 5,000 people at a Minnesota demo. More important to Best Buy, however, is that the demo created a record weekend for the store's big-screen/ projection-TV sales. — *B.F.*

Wind from the East

Get out your hard-earned dollars, movie fans, because the

Personal Robots

From Maria in Fritz Lang's *Metropolis* to Gort in *The Day the Earth Stood Still* to *Forbidden Planet*'s Robby the Robot to *Star Wars*' R2-D2, the robot has been a staple of science fiction. If Sony has its way, however the robot will become as popular as the Walkman for personal entertainment.

Sony sees personal robots as entertainment machines, designed just for fun. The prototype shown here is about the size of a small puppy and plays like one . . . well, sort of. Its 64-bit processor, 1£0,000-pixel "eye," and 8 megabytes of memory allow it to pe form such tricks as scurrying after a ball. In fact, at RoboCup "98 — an academic conference on robot technology held in Paris during the World Cup competition — Sony staged exhibition soccer games featuring prototype robots.

Sony has proposed the Open-R (Open Robot) architecture as a starting point for others to join in the development. This architecture makes it possible to change a robot's body configuration by exchanging hardware modules. -B.F.



what, you've never heard of *Tenchi Muyo*?!? (You were expecting *Jurassic Park*? *Titanic*?) *Tenchi Muyo* is an extremely popular animated film in Japan — which is fine, because it's available only in Japan anyway.

long-awaited first DTS DVD has arrived. It's *Tenchi Muvo* and . . .

Let's try this again: Get out your hard-earned yen, Japanese movie fans -M.G.

DVD as It Ought to Be

Buy an RCA DVD player before the end of the year and you'll get DVD called The Best One Ever, produced by NFL Films. Unlike most DVDs on the market, The Best One Ever takes advantages of the special features that DVD offers. For example, you can switch camera angles to see plays from different perspectives while listening to an uninterrupted soundtrack. You can also choose between English- or Spanishlanguage narration, or listen to play-by-play commentary from either the Broncos or Packers

Never Too Late

The versatile André Previn — composer, pianist, conductor — has written his first opera, *A Streetcar Named Desire*, based on the play by Tennessee Williams. Presented by the San Francisco Opera in September, the performance was recorded by Deutsche Grammophon, which plans a December release. PBS videotaped the production and will air it at the end of December. A former Hollywood boy wonder, Previn was a senior citizen pushing 70 by the time he got around to *Streetcar*. Mozart wrote his first opera at age 12, Rossini at age 18, and Verdi at 27, but never mind. We knew Previn had it in him. In fact, *Stereo Review* gave him an award for his Outstanding Contributions

radio announcer. And all of the soundtracks are available in 5.1-channel Dolby Digital surround sound.

A/V digest

• N2K and CDnow, the two largest online music stores, are reportedly preparing to merge. Together, the two had sales of \$21 million in the third quarter of 1998.

• A 2,200-square-foot Ultimate Home Theater Experience exhibit is scheduled to open this coming spring in Epcot at Walt Disney World in Orlando. Exhibitors include GE, GM, IBM, Lutron, Motorola, and

Silicon Graphics. • Pioneer and Sony, both major disc-player manufacturers, have joined the race to develop a blue laser whose shorter wavelength should allow for far greater discstorage capacities than the current DVD format. Don't expect to see the fruits of their labor for at least a few more years.

• The Recording Industry of America (RIAA) has filed a complaint against Diamond

Energy-Saving Stars

When you turn your VCR off, it's off, right? Not even close. It still has to keep its clock ticking and its infrared eye open so that it can see the signals from your remote. And it's not just your VCR that works this way. In fact, scientists have estimated that we spend more than \$3 billion each year on power for devices that we've turned "off." And that's just here in the U.S.

The Environmental Protection Agency is not blind to the problem, and it is encouraging manufacturers to join its Energy Star Home Audio and DVD Program. In return for being a good corprate citizen and lowering power requirements, manufacturers earn the right to affix an Energy Star label to products that conform to the guidelines. If you see such a label on a VCR, for example, you can be sure that it consumes less than 4 watts when it's "off." A TV must be even more efficient to get the star, drawing less than 3 watts when off.



to the Quality of American Musical Life in 1987, when he was a mere kid of 58. Winner of seven Grammy Awards and others too numerous to list, Previn will receive the Kennedy Center Honors in Washington in December.

- William Livingstone



Multimedia, which was set to introduce Rio, a portable MP3 recorder for downloading music files from the internet. The RIAA says that Diamond's Rio violates the Audio Home Recording Act.

Media Monsters

In this age of media consolidation, can you guess which company owns the most television stations in the U.S. and reaches the most households with its signals? Give up? It's Paxson Communications, which owns 80 stations and reaches a whopping 67.3 percent of all households. What's second? It's the newest of the Big Four networks, Fox, which owns 22 stations and reaches more than 40 percent of U.S. households.

The other big networks are in the top ten, with CBS at No. 4, NBC at No. 6, and ABC down at No. 9, trailing newcomer Sinclair Broadcast Group. Thanks to the Telecommunications Act of 1996 and its relaxation of station-ownership rules, the TV industry just ain't what it used to be.

Sing Out, Bert

This fall a life-size statue of Bert Parks was erected at the Sheraton Atlantic City Convention Center hotel in New Jersey. For 25 years Parks (who died in 1992) was the emcee of the Miss America Pageant and serenaded each new winner with the song "There She Is." The statue shows Parks holding a crown outstretched, and originally when a tourist stood under it to be photographed, motion sensors would start a recording of Parks singing the famous song. Soon after the statue was installed, however, the widow of Bernie Wayne, the composer of "There She Is," requested \$50,000 in royalties for this use of the song. The statue was silenced until further notice. — W.L.

Web Wares

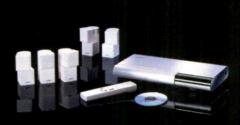
Pop musician Dave Stewart (best known as the male half of the Eurythmics) is out to prove that the Internet is about more than just slide shows, chat rooms, and virtual malls. Stewart has turned his Web site (www.davestewart. com) into the Sly-Fi Network, a multimedia extravaganza of graphics, audio samples, and video and music downloads. The site has played host to live cybercasts featuring the likes of Bob Dylan, Sinéad O'Connor, and Jon Bon Jovi, and has staged a number of virtual jam sessions. Stewart encourages visitors to download the sessions and manipulate them in any way they see fit.

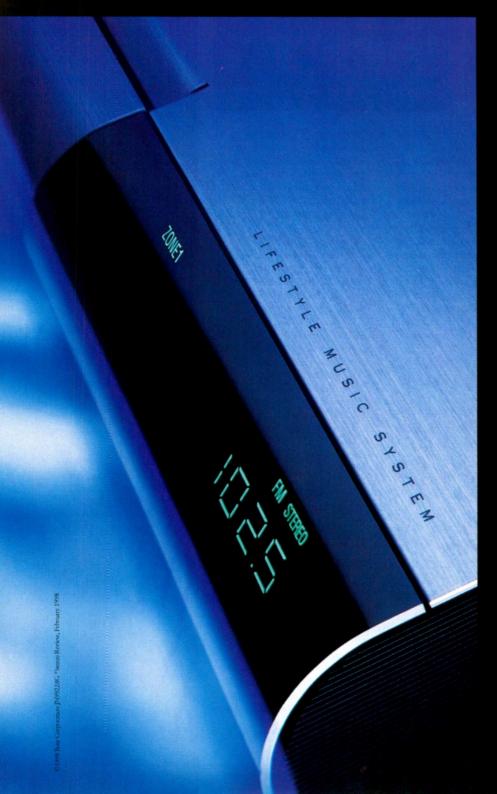
On September 15, Stewart staged a 24-hour event where he asked Netizens from around the world to collaborate with him on a song. Stewart sifted through contributors' lyrics, samples, and rhythms and crafted them into "Get Over Yourself," which he began distributing through the site 4 hours after the session ended.

Stewart is also relying heavily on the Net to promote his new album, *Sly Fi*. The album is currently exclusively available, on CD or via download, through the on-line store Music Boulevard. (It will be in nonvirtual stores in early 1999.) You can also download a free bonus track, "Sour Cream," through Stewart's Web site. — M.G.



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LETTERS

DVD Worries . . .

I am a DVD early adopter and an anti-Divx zealot. To say that we "should be breathing a little easier now that Fox has jumped on the DVD bandwagon" (as stated in "A/V Digest" in October "Random Play") is quite optimistic. I'll stop worrying that I made the wrong decision only when Divx is dead *and buried*, and when I see DVDs on store shelves of *Close Encounters*, *Jaws*, *Deep Impact*, and so on. Alfred Aidala Bronx. NY

Allen Watson III, who complained in October "Letters" about "the dearth of material on DVD," hasn't done his homework. Perhaps the numbers are not there yet, but the music videos that are now available on DVD should be awesome. Fleetwood Mac's *The Dance* was my first DVD, but before getting my player I purchased Queen's We Will Rock You and Tina Turner Live in Amsterdam on Dolby Digital laserdiscs. While the remixed Queen disc sounds great, the Tina Turner is absolutely spectacular. And both titles are available on DVD.

I also concur with editor Bob Ankosko's comments (October "Track One") that the multichannel mix makes a difference. The mix on *The Dance*, for instance, is nowhere near as good as on the Tina Turner disc.

Tony Williams Havertown, PA

... and DTS Envy

After saving for some time, I purchased a Dolby Digital A/V receiver with THX processing and a DVD player. I thought I wouldn't need to update my system again for years to come. Now I keep hearing and reading about DTS discs. What gives? Did I make a mistake? Will I have to purchase a decoder or a DTS player to view a DTS-encoded disc? Will my receiver work with the DTS format? Sheesh, it's getting as bad as the computer market. Don't the manufacturers of these products realize that many of us with modest incomes can't keep up?

Michael Boyett Littleton, CO

We know the feeling! But while there are some very good DTS-encoded laserdiscs and CDs available, so far there is exactly one DTS-encoded DVD (see "Wind from the East," page 9). At this point, it doesn't look as if DTS is going to be a major player in the DVD marketplace, and if it becomes one, you can always buy an outboard DTS decoder. That will work fine with your existing audio equipment as long as you have a so-called "DTS-compatible" DVD player that can pass along a DTS bitstream. Or you could make do with the Dolby Pro Logic-compatible soundtracks that must also be included on DTS DVDs. For more on DTS, see "The High End," page 116.

Pay-per-Whatever

In a reply to several October letters, Ken Pohlmann said that "pay-per-listen and perper-view are the future of the music and film industries." It's only the future if the public allows it to be. Of course, film studios and record companies would love to have everything on a pay-per basis, but can you imagine parents agreeing to pay \$3 every time their kids want to watch The Lion King? Just remember: these are some of the same film studios that didn't want to allow home VCRs. Where would Disney be today if its suit against the Sony Betamax had prevailed? **David Cash** Avon, CT

Where will it end? Will I someday have to pay to reread a book, or even look up a passage in a novel? Ridiculous. When an artist releases his or her work, the person who buys it should have sole rights to that copy of the work. Copying for profit is another situation entirely. Recorded media are not like concerts — they're like books. I own my CDs, and they're mine to do with as I please as long as I don't violate any copyright laws! Christopher White Santa Rosa, CA

Ken Pohlmann is a professor of music, correct? If I am not mistaken, the mission of education is to disseminate knowledge in all of its various forms. What would our society be like if its media were metered out in measured chunks only to those with sufficient means? It would be a shame if Mr. Pohlmann's next generation of music students were musically challenged because they couldn't afford Bach for more than 15 minutes a day. Christopher Zarcone Phoenixville, PA

Prof. Pohlmann replies: Ah, if only all music students really did listen to Bach for 15 minutes every day! Meanwhile, in the long run I see online music libraries as a way to disseminate music, not restrict it. A student could retrieve any piece of music ever written, directly from home or school. There's no reason to suppose it would be expensive once economies of scale kick in, because so many of the conventional distribution costs would be avoided. E-music is the future!

While the record industry whines and bellyaches about all the illegal copying going on (though they're making tons of money), you don't hear much about how the consumer gets ripped off by bad albums. Un-

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LETTERS

Ranada Stereo Review April 1998 David

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like almost everything else you buy, you cannot return an unsatisfactory CD, the reason given being — and I suppose it's true — that you could have made a copy of it.

When you buy a CD, having heard only one or two (or none) of the cuts, you frequently have little idea of the quality of the music. Virtually every music buyer has numerous CDs that were listened to only once or twice. The industry dodges responsibility for bad releases with the invalid argument that this is art, and the quality of the art is in the eye of the beholder.

So while I'm not a big fan of copy protection, I would say that if it is implemented, it should be rock-solid and unbreakable. Not even one copy should be allowed. That way the recording industry's and the merchant's excuse for not accepting returns would no longer exist. What a glorious day it will be when we can return bad music!

> Stephen Lee Tulsa, OK

Mix Your Own CDs

Wow, what a great idea ("Mixing Your Own Discs," October "Random Play"): you choose the songs, pay \$20, and get a custom CD. The problem is, all of the music on both of the Web sites mentioned is *crap*! Who the hell created these sites? Haven't these people ever heard of demographics?

You wrote: "It's just one more example of how the Internet is changing the way we buy music." Yeah, right. I think I'll go order some Conway Twitty, a "featured artist," instead of Metallica. Greg Manske Winooski, VT

Repair Hell

Have you tried getting your broken audio, video, or computer equipment replaced or repaired lately? If so, then you know that repair manufacturers, service facilities, and vendors stretch repairs out indefinitely and are unable to restore electronic gear to asnew condition.

The hell that begins when a piece of gear stops functioning is enough to kill the dream of any die-hard audiophile, videophile, or computer jock to always have the latest and newest gear. The electronics industry has driven me to the point where I now prefer to stick with a working piece of gear instead of risking the nightmare that ensues when purchasing a new one.

There is an argument for purchasing equipment at its full price: the seller will guarantee replacement or refund if the device is defective or if you are not completely satisfied. Perhaps old-fashioned merchandising, where the buyer pays top dollar and the customer is always right, has a

12 STEREO REVIEW DECEMBER 1998

place in today's world. You pay more but you get more. Peace of mind is very important to proper appreciation of music and art.

> Arthur H. Neill, Jr. Davidsonville, MD

Digital TV and Letterboxing

In "Digital TV Demystified" (July 1998), Jim Barry's statement that films "will no longer have to be altered to fit into a narrower TV screen" propagates the myth that widescreen high-definition DTV will render letterboxing obsolete.

Today's standard TV screen has an aspect ratio (width vs. height) of 1.33:1 (the screen is 33 percent wider than it is tall). The aspect ratio of HDTV is 1.78:1 (more commonly referred to as 16:9). In the U.S., the two 35-millimeter theatrical film formats currently in use produce images with aspect ratios of 1.85:1 and 2.40:1 when properly projected. An unaltered HDTV presentation of a film in either of these formats will still require letterboxing (but in the case of a 1.85:1-ratio film, the black letterboxing bars will be almost nonexistent). On the other hand, an unaltered HDTV presentation of a 1.33:1 film or TV show will require black bars on the sides!

Like it or not, letterboxing is here to stay. Joe Zollner West Allis, WI

Relevance

I have been a faithful subscriber for about five years now, and every month you put out a great magazine full of relevant information and troubleshooting for fans of today's technologically advanced stereo components.

I especially enjoy "New Products" and Corey Greenberg's insightful commentaries. I really like the articles on buying systems to fit your budget. How about one on purchasing used components through pawn shops or garage sales, including what to watch out for? This could be a viable option for putting together a high-quality system at a fraction of the retail cost.

> Robert S. Hargie Deerfield Beach, FL

November "Systems" featured a rather elaborate setup consisting mainly of used gear.

High-Definition DVD?

I understand that digital TV (DTV) and DVD technologies are incompatible due to the huge data rate required by DTV. However, will it be possible to put high-definition video images on DVD media either in a compressed or uncompressed format? Certainly the technology, from a computer perspective, is there. If I were planning a product like DVD and I knew that digital TV was on the horizon, I would take that into account. Why didn't the standards committee do the same? **Robert G. Parker**

Salt Lake City, UT

High-definition video on DVD will become feasible only with the development of longlife solid-state blue lasers, which could occur within a few years. But the video data will still have to be compressed.

Music vs. Sound Effects

I must support reader Erik Hvilsted, who received short shrift from you regarding his letter in the October issue questioning the value of home theater. You told him to "get off [his] couch and experience a *good* home theater demo." Are we at the point where in your eyes music is no longer equal in importance to the equipment that delivers it?

Robin Middleton Seattle, WA

Those of us who work at this magazine are passionate about both music and home theater, and we feel that good multichannel audio equipment enhances both experiences immeasurably. It's unfair to dismiss 5.1channel movie soundtracks as mere "sound effects," especially if that's not based on listening but only a belief that TV is "primarily a visual medium," to quote Mr. Hvilsted.

Calling Day Sequerra

Brian Fenton's "Clear Signals" in July had a review of FM antennas that I found quite useful. Unfortunately, by the time I decided on the Day Sequerra FM360 FM antenna he reviewed and called the phone number listed, it had been disconnected. Is the anntenna still available? James Reber Indiana, PA

Day Sequerra is still in the antenna business at the same number, but it's a small, specialty company (it took us several tries to get a phone call returned). You might also look for the Radio Shack No. 15-1846, which was designed and manufactured by Day Sequerra.

CD Recording Puzzles

I found the articles about CD recorders in October very interesting. I understand that if you copy a commercial CD, the copy is encoded so that additional copies cannot be made from it. Are home recordings similarly encoded? I have some old open-reel recordings made 20 years ago that I want to save in CD format for posterity. Ideally, these recordings should not be copy-protected so that my children can make multiple copies in future years. Randy Martin Fair Oaks, CA

The Serial Copy Management System built into home digital recorders only prevents second-generation digital copies. You can make as many digital copies from a digital original as you like, one at a time, or all the analog copies you like from any copy of the original. Thus, your children could record additional CDs directly from the CD "original" you made from your analog tapes. They just could not copy one of those copies without going back into the analog domain.

Thank you for the review of the Philips CDR 765 dual-tray CD recorder in October, but two points were not clear: 1) When dubbing from an external CD source, is it necessary to have a digital output on the source to get a bit-perfect copy? 2) Assuming a digital output from a CD changer, can a program of tracks from several discs in the changer be dubbed onto a compilation disc without your having to monitor the recording track by track? **Bill Soter**

Fairfax Station, VA

Yes on both counts.

Divx Boosters

Before I purchase a DVD player, can you tell me what DVD players will also play Divx discs? I like the idea of paying \$4.50 to watch a film as often as I choose for a period of time, then tossing it, better than Blockbuster's late fees. Mark Collins Columbus OH

So far, there's only the RCA RC5230Z, Pro-Scan 8680Z, and Zenith Inteq DVX2100. A Panasonic Divx/DVD player is also scheduled to arrive before year's end, and other manufacturers have said they will introduce Divx machines in 1999.

I am tired of small-minded people ranting against the Divx concept, Divx equipment, and anyone who doesn't seem to disdain Divx. The only difference between physical rental and the Divx principle is where the case sits between "rentals." Divx allows you to "rent" again without worrying about getting a damaged, warbly sounding videotape. Being a "philistine" who has never seen a movie more than twice, I'm a big fan of the Divx concept: for two 48-hour "rentals" I pay \$9, as opposed to \$25 for a DVD that I'll watch the same two times. And if you hate the idea of being charged each time you watch, you can "silver" the disc for the same money as a DVD purchase. So far, anamorphic 1.85:1 and 2.35:1 transfers are the only DVD features missing in Divx, and that will change. **S. David Ahn** Laredo, TX

Many Blockbuster stores now rent DVDs for \$2.99 for four nights, or less than half of what Divx costs for the same period.

The *only* advantage Divx should have over DVD is the release date of each title. That could be (and should be) the same as for the feature film itself. Imagine, no more waiting for a movie to come out in home video, or having to go out to a theater and wait in line and all the hassles that go with that. I would be willing to pay \$10 per viewing for 90 days, then \$4.50 after that. Joel Reisteter Bethlehem, PA

Where's the Nitty Gritty?

What gives? In the June 1998 issue, Alanna Nash reviewed (Pop "Quick Fixes") the Nitty Gritty Dirt Band's new album, *Bang*, *Bang*, *Bang*. A great review, but when will the CD be released? I've tried 12 stores, and no one knows. Ken Springer Indianapolis, IN

This is a sad story: The album was released by Rising Tide, and that's what Alanna Nash reviewed. But before the review was published, Rising Tide went out of business. We heard that Decca would reissue a number of Rising Tide recordings, including that one, so when we printed the review, we indicated that it was on Decca. Subsequently, however, Decca's own record business hit the skids, and it was folded back into its corporate parent, MCA — which, for reasons probably known only to its accountants, declined to release that and other long-awaited albums. Sorry!

Corrections

Because of a mixup, the Cambridge Sound-Works system that Tom Nousaine tested for "Multimedia Speaker Sound-Off" in October was not the MicroWorks as stated but the smaller and less expensive SoundWorks multimedia system.

Also in October, Daniel Kumin mistakenly said that the Sherwood AM-9080 power amplifier contains two transformers; there are actually three.

We welcome your letters. Please write to Editor, Stereo Review, 1633 Broadway, New York, NY 10019; or e-mail to StereoEdit@aol.com. You should include your street address and telephone number for verification. Letters may be edited for clarity and length.

"Do you really need new speakers?"

Matt Polk, Speaker Specialist

aybe you don't need new speakers. Maybe you do. Here are some tips on how to know whether or not it's time for a change.

Do they work right?

The first thing to check is the woofer surround — the rolled edge of the driver. If it's made of compressed foam and more than 5 years old, it may be shot. Are there any holes or tears? Gently touch the surround, if it feels brittle, stiff and ready to crumble, you need new woofers. If the surrounds are rubber they're probably perfect.

The next thing to check is whether all the drivers are making sound. Play the speakers with the grilles off. Lightly touch all the drivers to feel if they're moving. Cup your hand over the tweeter, remove it. Does the sound change? If not, the tweeter is dead. Play a solo piano recording at a moderate loud level. If you hear scratchy sound or a buzz, the midrange or tweeter may be damaged.

If you have any doubts, bring the speakers in to a local audio store and ask them to check them out. Most dealers will be happy to help.

Are you happy with the sound?

Do they sound great with all the kinds of music you're listening to today? Some speaker companies voice their speakers to sound good with certain types of music (a bad policy in our opinion). If your musical tastes have changed since you bought your current speakers, it might be time for something better. But if you're really happy with the sound — stick with what you've got.

www.polkaudio.com

5601 Metro Dr. Baltimore, MD 21215 Customer Service (800) 377-7655 Monday - Friday 9:00am to 6:00pm E.S.T "Polk Audio" and "The Speaker Specialists" are trademarks of Britannia Investment Corporation used under license by Polk Audio Incorporated.

Dealer Locator Number 1-800-992-2520 Ad code: 10015

Do they look good? Do you care?

Do your current speakers look appropriate and fit comfortably in your room? Has your significant other banished them to behind the couch? Don't laugh, I know a household where that happened. Today's speakers are generally smaller and better looking, with better performance than speakers of ten years ago.

What will you do with the money you save?

If looks and size are not an issue, if everything's working OK and you like the sound, save your dough. Buy some new CDs or a DVD player or some flowers for your partner.



NEW! Polk bookshelf speaker models are now at Polk Audio retailers

Free stuff!

If you're shopping for a home theater system, you're going to find that it's a lot more complicated than buying a pair

of speakers. But the rewards are greater, too. Call (800) 627-7655 ext. 101 for your free copy of the *Home Theater Handbook*. It's full of practical, unbiased advice on how to select and get the greatest performance from a home theater system.

Listen for yourself.

I've been designing award-winning speakers for over 25 years and naturally I think my speakers are terrific. Don't take my word for it. Go to a store and listen to Polk Audio speakers and decide for yourself.



NEW PRODUCTS



Denon One of the first components to receive THX Ultra certification, Denon's DVD-5000 DVD player features a decoder chip for HDCD-encoded CDs as well as a proprietary Alpha 2.0 audio processor that is said to provide improved resolution and more natural spatial reproduction. The player is DTS-compatible and includes 96-kHz/24-bit audio processing and 10-bit video digital-to-analog (D/A) converters. It has composite-, component-, and S-video outputs and one optical and one coaxial digital audio output. Price: \$2,500. Denon, Dept. SR, 222 New Rd., Parsippany, NJ 07054; phone, 973-575-7810; Web, www.del.denon.com

M&K Up against the wall! M&K Sound's MX-700 powered 200-watt subwoofer is said to be ideal for placement against a wall or in a corner. Its two 8-inch long-throw drivers are mounted to fire down and out of the back of the cabinet for maximum loading by the room's wall and floor. The result is claimed to be a flat response to below 20 Hz at high output levels. The MX-700 weighs 41 pounds, measures $14\frac{1}{2} \times 17\frac{1}{2} \times 12\frac{1}{8}$ inches, and is available finished in black or white lacquer. Price: \$1,395. M&K Sound, Dept. SR, 10391 Jefferson Blvd., Culver City, CA 90232; phone, 310-205-2854; Web, www.mksound.com





Klipsch Loud things can come in small packages. The six-piece Klipsch Quintet Micro Theater speaker system is rated to deliver a maximum output of 110 dB SPL. The system comprises four 7-inch-tall satellites, a 12-inch-wide center speaker, and a 14³/₄-inch-tal powered subwoofer. The ported satellites each have a 3-inch woofer and a ³/₄-inch neodymiummagnet compression tweeter radiating through the company's new MicroTractrix horn. The center speaker, also ported, has two 3-inch woofers and the same horn-loaded tweeter. The sub has an 8-inch driver, line-level and speaker-level inputs, a 100-watt amplifier, a continuously variable low-pass crossover, and a phase switch. Price: \$899. Klipsch, Dept. SR, 8900 Keystone Crossing, Suite 1220, Indianapolit, IN 46240; phone, 800-554-7724; Web, www.klipsch.com



ATI Heavy lifting required: Amplifier Technologies, Inc.'s AT2505 five-channel power amp is rated to deliver 250 watts per channel into 8 ohms, all channels driven, or 375 watts per channel nto 4 ohms. Although ideal for home theater use, it can also be used for multiroom systems. The 106-pound monster amp has a modular construction for easy troubleshooting — each amplifier module contains its own fuse-fault indicator so that a dead channel can be identified quickly. Extra-big heat sinks provide over 625 square inches of surface per module, enough to cool the amp without noisy internal fans. Price: \$2,695. ATI, Dept. SR, 19528 Ventura Blvd. #318, Tarzana, CA 91356; phone, 886-777-8507; Web, www.ati-amp.com

NEWPRODUCTS



Panamax To insure that the only surges in your home theater are from adrenaline, Panamax offers the MAX 2000 programmable power-control system. It guards against electrical surges and spikes with protection circuitry installed between all three AC power-line conducters — line to neutral, line to ground, and neutral to ground. The MAX 2000 is said to protect equipment against surges as high as 40,000 amperes, or twice that of a typical lightning strike. Three sets of gold-plated jacks protect incoming satellite, cable, and rooftop antenna signals as well as signals going out to a remote TV. A programmable delay lets the MAX 2000 switch several electronic components on or off in sequence at the touch of a single button. Price: \$849. Panamax, Dept. SR, 150 Mitchell Blvd., San Rafael, CA 94903; phone, 800-472-5555; Web, www.panamax.com



Philips Compiling your favorite songs on one disc just got a lot cheaper with the CDR 760 CD recorder from Philips. Priced at cnly \$549, the CDR 760 can copy all 44.1-kHz (CDstandard) digital signals as well as analog sources, though it doesn't contain a sampling-rate converter for non-CD digital sources. It has a one-touch recording mode and works with both write-once CD-R discs and rewritable CD-RWs. Other features include a 1-bit analog-to-digital (A/D) converter and automatic or manual track numbering. It has analog and coaxial digital inputs. Philips Electronics, Dept. SR, 64 Perimeter Center E., Atlanta, GA 30346; phone, 800-531-0039; Web, www.philips.com

NOTE All prices and product information are supplied by the manufacturers. Dealer prices may vary.

3M No ordinary rag: 3M's High Performance Cloth can be used dry or damp to clean A/V components, TV screens, and optical discs. It's washable and lintfree, and its soft nubby texture is said to lift dust, dirt, and oi from surfaces without cleaning fluids. Price: \$7 a pair. 3M, Dept. SR, 3M Center, St. Paul, MN 55144, phone, 800-364-3577; Web, www.mmm.com



MTX Installing in-wall speakers can be a snap with MTX's Blueprint Series of pre-assembled in-walls. The line includes five models. The 620W shown here has a 1inch swiveling tweeter and a 6½-inch woofer. Its bandwidth is given as 43 Hz to 20 kHz, nominal impedance as 8 ohms, and sensitivity as 85 dB. It measures ⁻2 x 8⁵/₈ x 3 inches. Price: \$260.

MTX, Dept. SR, 4545 E. Baseline Rd., Phoenix, AZ 85040; phone, 800-225-5689; Web, www.mtxaudio.com





Phase Tech

The Premier Collection PC-500 speaker from Phase Technology features a built-in side-firing powered subwoofer. The front array comprises a 61/2-inch Kevlarlaminatec flat-piston woofer and a 1-inch soft-dome tweeter. The sub has a 12inch driver and a 125-watt amp. Bardwidth is given as 20 Hz to 20 kHz, nominal impedance as 8 ohms, and sensitivity as 92 dB. The PC-500 stands 421/2 inches high and tapers from 7 inches wide at the front to 9 inches at the back; depth is 211/4 inches. The top has a pianoblack finish, and the black wraparound grille cloth can be contrasted by burgundy or gray grilles over the drivers. Price: \$2,000 a pair. Phase Technology, Dept. SR, 6400 Youngerman Circle, Jacksonville, FL 32244; phone, 888-742-7385; Web, www.phasetech.com



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3. There will be 4 Grand Prize Winners. Winners will be determined by a random drawing from all entries received. The drawing will be held on or about May 31, 1999 byan independent judging organization whose decisions are final on all matters relating to this promotion. Odds o winning depend upon the number of eligible entries received. Approximate number of entries distributed: 14 million.

4. Prizes

Grand Prizes: Each Grand prize consists of a choice of one of the following lifestyle prize packages or the cash equivalent of \$300,000.* Total approximate retail value of all prizes: \$1,200,000.

PRIZE DESCRIPTIONS:

Lotto Winner: Prize(ARV*) - Airstream Trailer (\$40,003), Monster Bronco (\$45,000), Satellite dish w/ installaton (\$688), Satellite TV service for one year (\$1,290), Industrial barbecue grill (\$4,000), Above ground swimming pool (\$3,989), Riding lawnmower (\$12,670), Refrigerator (\$1,299), One year's supply of pork rinds (\$548), \$1,000 taxidermy gift certificate (\$1,000), Cash (\$189,516). Total approximate retail value of prize: \$300,000.

Hollywood Star: Prize (ARV*) - Cigarette boat (\$150,•00), Dodge Viper (\$73,000), Astrology chart for 1 year (\$3,120), Malibu home rental for 3 months including travel for 3 trips to Malibu for 2 (\$29,875), VIP Treatment at a trendy nightclub for 1 week (\$25,000), Award show wardrobe (\$10,000), 1 year's supply of hair gel (\$1C5), 4 cell phones (\$3,400), Watch (\$5,500). Total approximate retail value of prize: \$300,000.

Trial Lawyer: Prize (ARV*) - Mercedes SL600 (\$135_345), a career's worth of legal pads (\$1,559), 18-sheet capacity paper shredder (\$1,895), Condo in the Cayman Islands for 2 weeks including travel to the Cayman Islands fer 2 (\$9,700), 20-channel police scanner (\$473), Golf clibs (\$2,095), Toil-free number for 1 year (\$5,475), 10 pinstriped suits (\$7,950), Cash (\$135,008), Total approximate retail value of prize; \$300,000.

Suburban Gold Digger: Prize (ARV*) - Jaguar XK8 (\$75,280), Range Rover 4.65E (\$65,125), 1 yea's supply of bon bons (\$700), Tanning bed (\$2,500), Champagne for 25 baths (\$37,500), 1 year's supply of diet cola (\$364), Condo for 1 month in Palm Beach, Florida including travel to Palm Beach for 2 (\$13,000), Cash (\$105,531), Total approximate value of prize: \$30C,000. *ARV-Approximate Retail Value

Automobile as Prize

Prize winners must be licensed drivers at time of prze acceptance. Registration, title, licensing fees and insurance costs if applicable are solely the responsibility of the winners. Prize winners do not have choice of car color or options.

Travel as Prize

Travel must be completed by May 31, 2000. Restrictions and blackout dates may apply. Accommodations are subject to availability and change without notice. Trip companions must also sign and return a liability/publicity release prior to travel. Taxes, tips, alcoholic beverages, ground transportation not specified herein and all other expenses not specified herein are solely the responsibility of winners. All air transportation will be round trip coach, unless otherwise specified herein, from airport nearest winner's home location. The difference between any stated value and actual value will not be awarded to winners. In the event of cancellation by winner, the ability to reschedule will be allowed only at Sponsor's discretion. 5. Densing latencines with be article the neil hereil

5. Provisional prize winners will be notified by mail by 6/30/99 and will be required to sign and return Affidavit of Eligbility/Lability and Publicity release within 20 days of delivery. Noncompliance within this time period or return of any prize/prize notification as undeliverable or refused may result in disqualification and an alternate winner may be selected. Provisional prize winners are subject to age verification. All federal, state and local income and other taxes, licenses, fees and insurance are the responsibility of the winners. No substitution, transfer of prizes, or election of cash in lieu of prizes will be permitted except at sole discretion of Sponsor or as specifically set forth herein. One prize per household or framily. Sponsor reserves the right to substitute a prize of greater or equal value if the prize chosen is not available. Any prize may be awarded in gift certificates or cash sums at Sponsor's sole discretion. All prizes will be warded and will be fulfilled in 1909, except for travel, which may be fulfilled in 2000.

6. Any game materials including without limitation the 'offer, rules and announcement of winners, containing production, printing or typographical errors, or obtained outside authorized, legitimate channels are automatically void; and the liability of Sponsor, if any, is limited to the replacement of such materials and recipient agrees to release Sponsor, its parent, the judging organization and their respective officers, directors, employees and agents from any and all losses, claims, or damages that may result.

7. By accepting a prize, winners agree to grant R.J. Reynolds Tobacco Company the right to use their names, biographical information and/or likenesses for promotional purposes without further compensation, unless prohibited by Iaw. By claiming a prize, winners agree that R.J. Reynolds Tobacco Company, their affiliates, directors and judging organization shall have no liability for any injuries, losses or damages of any kind (including death) resulting from acceptance, possession, participation in or use of any prize.

 For advance copies of Affidavit of Eligibility/Release of Liability/Publicity/Prize Acceptance Form or the names of prize winners (available after 8/1/99), send a separate, self-addressed stamped envelope to Camel's Mighty Tasty Lifestyles Winners List, P.O. Box 5694, Norwood, MN 55583-5780. Indicate "Affidavit" or "Winnes List" as applicable on the outside of envelope.

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NEWPRODUCTS



Sima The SVS-4 A/V switcher from Sima promises to take care of your home theater switching needs without requiring the push of a single button. It monitors its inputs, senses the component in use, and automatically routes the appropriate signals to its outputs. It can also convert composite- to S-video, increase or decrease the audio's dynamic range, and minimize volume levels when you're switching between channels or during commercials and special effects scenes — all automatically. It has four audio and four video inputs and two audio and two video outputs. An infrared remote control, RCA cables, and an AC wall adapter are included. All automatic features can be manually defeated. Price: \$150. sima, Dept. SR, 140 Pennsylvania Ave., Bldg. #5, Oakmont, PA 15139; phone, 800-345-7462; Web, www.simacorp.com



Toshiba Catch the new picture show with the SD3108 DVD player from Toshiba. It contains 10-bit video and 24-bit audio D/A converters and can play DVDs with 96-kHz/24-bit audio as well as CD-Rs and video CDs. A 5.1-channel Dolby Digital decoder is built in, and the player is compatible with DTS-encoded DVDs. Spatializer N-2-2 circuitry is provided to simulate surround sound with just two speakers. Other features include moving- or still-picture zoom and slow-motion play modes, noise and jitter reduction circuitry, and a pit-rate display. The SD3108 has coaxial and optical digital outputs, composite-, component-, and S-video outputs, two pairs of analog audio outputs, and a headphone jack with a volume control. A back-lit preprogrammed universal remote with jog/shuttle control is included. The SD3108 measures 17 x 31/4 x 121/8 inches and weighs 73/4 pounds. Price: \$699. Toshiba, Dept. SR, 82 Totowa Rd., Wayne, NJ 07470; phone, 800-631-3811; Web, www.toshiba.com/tacp

C. Crane

Hang on to your local shock jock's every word with the FM Reflect indoor antenna from C. Crane. It incorporates a dipole for maximum gain across the entire FM broadcast bandwidth, but it is said to be up to twice as "powerful" as a standard dipole antenna. It is bidirectional and can be installed as a loop to optimize reception of circularly polarized signals, which many broadcasters have come to favo-The FM Reflect has a 54-irch element with an 8-fcot feed line and is available in white or black. Price: \$30. C. Crane, Dept. SR, 558 10th St.

Fortuna, CA 95540; phone, 800-522-8863; Web, www.ccrane.com





NHT An outdoor speaker for all seasons, the OutdoorOne from NHT features a moisture-resistant two-way design said to withstand extreme temperatures ranging from -20 to +140° F. A 61/2-inch woofer and a 1-inch tweeter are housed in a thermoplastic enclosure. Bandwidth is given as 57 Hz to 21 kHz. nominal impedance as 6 ohms, and sensitivity as 88 dB. The OutdoorOne measures 113/4 x 71/4 x 7¹/₂ inches; a mounting bracket is included. Price: \$200 a pair.

NHT, Dept. SR, 535 Getty Ct., Benicia, CA 94510; phone, 800-648-9993; Web, www.nhthifi.com

Labtec Make your mouse roar with Labtec's ATX-5820 multimedia satellite/subwoofer speaker system for desktop computers. The black subwoofer is ported and has a 6-inch driver. Each of the two computer-beige satellites houses a tweeter and two midrange drivers in a D'Appolito array; they are designed to be mounted on the sides of the computer monitor. Five discrete amp ifiers in a tri-amp configuration deliver 70 watts total power. The system's advanced digital signal processor provides 'virtual Dolby Surround sound as well as variable Spatializer 3-D imaging. Price: \$200. Labtec, Dept. SR, 1499 S.E. Tech Center Place, Suite 350, Vancouver, WA 98683; phone, 360-896-2000; Web, www.labtec.com

NEWPRODUCTS



Atlantic Technology The company's lowest-priced home theater speaker system, Atlantic Technology's six-piece System 4.5 includes 10½-inch-tall left and right front speakers, a center speaker, two 8-inch-tall dipole surround speakers, and a 17½-inch-tall powered sub. The three front speakers each have a 1-inch silk-dome tweeter and two 3½inch drivers, while the surrounds each have two ¾-inch tweeters in dipolar array, and two 3½-inch drivers. All five satellites have a rated frequency response of 125 Hz to 20 kHz ±3 dB, nominal impedance of 8 ohms, and sensitivity of 88 dB. The subwoofer contains a 10-inch long-throw driver and a 150-watt amplifier. Price: \$1,596. Atlantic Technology, Dept. SR, 343 Vanderbilt Ave., Norwood, MA 02062; phone, 781-762-6300; Web, www.atlantictechnology.com



Sharp The MD-R3 MD recorder and three-disc CD changer from Sharp will put your old cassette compilation tapes to shame. CD playback and MD recording can be synchronized with one button. A 20-bit processor is said to insure high-quality reproduction of the source signal, and a sampling-rate converter allows for recording 48-, 44.1-, and 32-kHz digital signals. Edit functions let you divide, combine, erase, and move recorded material, and tracks and discs can be named with up to 100 characters. A built-in clock provides timer-recording capability. Other highlights include date and time stamping and a 20-track music calendar. The MD-R3 has optical and coaxial digital inputs, line and mic inputs, an optical digital output, a line output, and a headphone jack. A remote control is provided. Price: \$500. Sharp, Dept. SR, Sharp Plaza, Mahwah, NJ 07430; phone, 800-237-4277; Web, www.sharp-usa.com

18 STEREO REVIEW DECEMBER 1998

Metra You won't accidentally sit on your CDs again after putting Metra's under-radio pocket into your car. Made of high-grade ABS plastic, it can hold three CD jewel cases. I:'s designed to fit Ford, Mazda, Nissan, Toyota, and Volvo 700 Series vehicles with after-market radios. Installation is done using the supplied brackets or by snapping it into place, depending on the car. Trim rings are provided to match it to the opening. Frice: \$20. Metra, Dept. SR, 460 Walker St., Holly Hill, FL 32117; phone, 800-221-0932; Web. www.metra-autosound.com



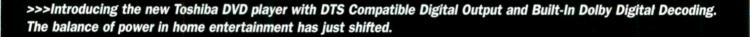


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Terk, Dept. SR, 63 Mall Dr., Commack, NY 11725; phone, 800-942-8375; Web, www.terk.com

Checkpoint You don't have to be a professional installer or a tweakaholic to appreciate how Checkpoint's SA-S sound-alignment system can help you aim your speakers. It includes the Model 770 SA-S laser tool, standard alignment switches, base plates, and stackers for laser-accurate directional placement of the speakers in your listening room or home theater. Also included is a magnetic-alignment switch so you can check — hands-free — the stability of a speaker's housing at varying power levels. Among the available options are angle-layout plot sheets, rotary bases, and a pro-style belt case. Price: \$150. Checkpoint, Dept. SR, 4025 Spencer St., Suite 304, Torrance, CA 90503; phone, 310-793-5500; Web, www.checkpoint3d.com





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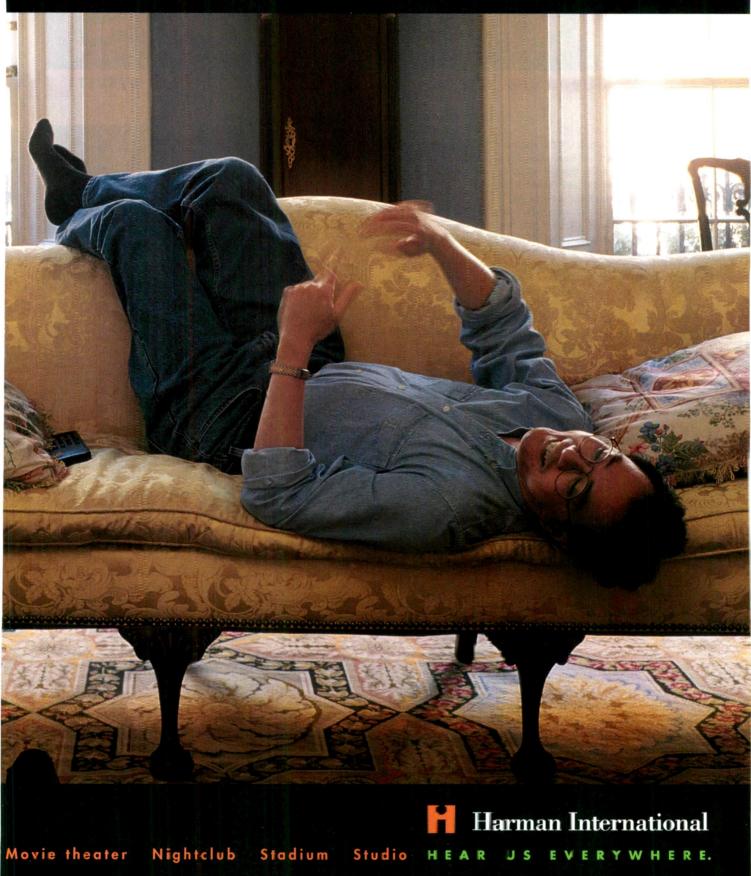
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RECOMMENDED NEW TITLES AND CLASSIC REISSUES BY RAD BENNETT

IT'S A WONDERFUL LIFE

Without question the public's favorite movie during the month of December, Frank Capra's 1946 tribute to the joy of living, starring James Stewart and Donna Reed. has seen several good laserdisc versions, including Republic's 45th-anniversary set. But Republic has made a THX digital master for its Silver Screen Classics DVD, and the resulting picture is sharper than ever. True, it appears to have been "scanned in" ever so slightly, most notably from the right side of the screen, losing about 4 percent of the picture compared with Republic's laser. Most viewers, however, will find this a minor problem, more than compensated for by the downright revelatory clarity of the black-and-white picture. And there are three extras, which, though not restored, are illuminating nonetheless: "The Making of It's a Wonderful Life," a trailer, and a tribute to the director from his son, Frank Capra, Jr. Two-sided; English, Dolby Digital two-channel mono; French and Spanish, Dolby Digital one-channel mono; closed-captioned; English, French, and Spanish subtitles; 132 min (feature). Republic Entertainment, \$24.98.

THE BISHOP'S WIFE

The Bishop's Wife, starring Cary Grant and Loretta Young and released a year after It's a Wonderful Life, is one of the most endearing holiday movies ever made. (It was redone as The Preacher's Wife in 1996.) The excellent DVD version, taken from a highquality print, lends plenty of detail to the black-and-white picture, such as in the Persian carpet covering the entryway to the bishop's house. Most noticeable, though, is how smooth the picture is, since grain and video noise are absent. The English soundtrack is effectively presented in both the original mono and discreet processed stereo plus ambience. The trailer has Grant, Young, and David Niven attempting to get past a studio guard by telling him about the movie they've just made. One-sided; English, Dolby Digital two-channel Chace

Surround Stereo; English, French, Spanish, and Italian, Dolby Digital one-channel mono; closedcaptioned; English, French, and Spanish subtitles; 109 min (feature). HBO Home Video, \$24.98.

WAG THE DOG

Whether you believe that life imitated art, President Clinton's order of air strikes in Sudan in the midst of the Lewinsky scandal prompted many observers to cite the parallels in last year's Wag the Dog. But under Barry Levinson's taut direction, the movie stands on its own as an indictment of the media in general and political coverage in particular. It features outstanding performances by Robert De Niro, Dustin Hoffman, Anne Heche, and William H. Macy plus the superb photography of Robert Richardson and the imitation-middle-America, tongue-in-cheek music of Mark Knopfler. New Line's Platinum Series DVD has lots of extras at no extra cost, including live-action search menus, full cast biographies and filmographies, a trailer, an audio commentary by Levinson and Hoffman, an essay called The Line Between Truth and Fiction, and From Washington to Hollywood and Back, a featurette packed with interviews. All of it is presented in near perfect video as well as audio that allows every single word of Hilary Henkin and David Mamet's potent script to be easily heard. Two-sided (Side A, 1.85:1 letterbox; Side B, pan-and-scan); English and French, Dolby Digital

5.1; closed-captioned; English, French,

and Spanish subtitles; 96 min (feature). New Line Home Video, \$24.98.

Wag the Dog's De Niro and Hoffman



Wonderful Stewart, Reed, and Kie

2001: A SPACE ODYSSEY

Thirty years later, Stanley Kubrick's film still amazes. The special effects have never been so well translated to home video as they are on this DVD. Even the best laserdisc editions had video-noise problems with the rich yellows, oranges, and reds, but those aberrations are now gone. Furthermore, the black backgrounds of the star fields are really black, and Douglas Trumbull's memorable slipstream light show depicting the journey to the outer reaches of space is, well, totally awesome. The music sounds okay; it was never intended as movie music but as recorded concert music, chosen from medium-fi recordings of the

1960s. But the breathing effects, the voice of HAL, and, yes, the *silence* of space are reproduced more accurately than ever. An interview with author Arthur C. Clarke is included as well as the trailers for both 2001 and 2010.

One-sided dual-layer; English, Dolby Digital 5.1; French, Dolby Digital two-channel mono; closed-

captioned; English, French, and Spanish subtitles; letterbox (2.35:1); 139 min (feature). MGM Home Entertainment, \$24.98.

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DD vs. "DD-Ready" Receiver

I'm looking to buy a new receiver and need some advice. What are the advantages and disadvantages to buying a Dolby Digital receiver vs. a "DD-ready" receiver and a separate decoder?

Brian Smith Littleton, CO

A The biggest — and overriding — advantage of a DD receiver with builtin decoding is that the hookup and setup/ calibration are simpler and more likely to come out right than with a separate decoder. This applies especially to the ins and outs of bass management.

Minidiscs and Magnets

Q I understand that the data "pits" in optical. Can the discs still be stored close to speakers or amplifiers without loss of information? Mike Hedrick Los Angeles, CA Certainly. While a very strong, focused magnetic field is used to create the "pits" on an MD, along with a very high temperature provided by a laser, once the recording has been made it's pretty much bulletproof under ordinary conditions. The weak magnetic fields generated by speakers or amplifiers will have no effect.

Feeding a TV

The only way I can get the video signal from my A/V receiver to my television is from the receiver's RCA outputs. My set, however, has only one F-type input. Is there any way to convert the signal from RCA to F-type? Sean Cunningham Naples, NY

A. First, simply making an adapter with one type of plug on each end won't work. The RCA jack on your receiver is feeding an unmodulated line-level video signal, while the 75-ohm F-type antenna input on your set wants to see a modulated RF (radio-frequency) signal such as would be delivered by your antenna or cable.

One solution would be to insert an outboard RF modulator to change the video signal from your receiver to the sort of signal your set can use. Radio Shack sells a modulator (No. 15-1283, \$30) that converts a line-level video signal to Channel 3 or 4. Alternatively, you could simply run a cable from the RF outputs of your VCR to the set; you can still hook the VCR's audio line-level outputs to your receiver. If you have more than one video source — VCR and laserdisc, say — cheap switches are available that will let you switch among them.

If you have a question about audio, write to Q&A, Stereo Review, 1633 Broadway, New York, NY 10019; e-mail, StereoEdit @aol.com. Be sure to include your name, mailing address, and phone number for verification; only your name, city, and state/country will be printed. Sorry, but only questions chosen for publication can be answered.



DIGITAL HORIZONS

KEN C. POHLMANN

Must See TV

IF YOU'RE LIKE ME, you didn't particularly enjoy going to the hospital to visit your uncle when he had his gall bladder removed, you haven't made any plans for next Memorial Day, you've never had a meaningful conversation with your neighbor, and you don't know the name of your boss's son.

On the other hand, you never miss *ER*, you know exactly what you'll be doing next Super Bowl Sunday, you've memorized most of Jerry and Elaine's conversations word for word, and you know that David Letterman's drummer is named Anton. That's because those things are on TV, whereas the rest of your life is not.

In fact, except for sleeping, most of us probably spend more time watching TV than doing anything else. And if we didn't get so sleepy, we'd probably spend even more time with the tube. Personally, I usually power down only after Dave's Top 10 list — unless, of course, he has a really good guest on after the commercials. For better or worse, the unreality of that colored light-and-sound box called television dominates the reality of our socalled lives.

Now, don't get me wrong. Television is a wonderful medium. It's taken me places I will probably never actually get to see, it informs me of historic events, it provides me with a wealth of information, it distracts me, and occasionally it even entertains me. But sometimes I worry about the amount of time I spend in front of the screen. (For some reason, I hardly ever worry about how much time I spend listening to music.) I worry that instead of living life, TV encourages me to observe it. I worry that TV is making us a society of passive voyeurs instead of active participants.

These concerns are nothing new. They were voiced when tiny black-and-white images were first coaxed out of the air, and the volume of these concerns has increased over the years, matching our swelling number of TV hours per week, not to mention the expanding sales of Doritos and our consequently expanding waistlines. But my concerns about our sedentary lifestyle have taken on new urgency as two phenomena, one firmly rooted and the other just taking root, promise to increasingly alter our behavior.

The first phenomenon is not new, but its ever more explosive growth is alarming. I'm talking about personal computers. Yes, everyone loves computers, we all want our children to learn to use computers, and we are convinced that computers will completely control the future world (they already pretty much run today's). Honestly, I absolutely love computers. I use computers constantly. Computers make me more productive. Computers help me work a lot harder. I can't imagine my life without them. My concern is that, like television, computers are perhaps narrowing the range of human existence, slowly transforming us into idiot savants, extremely skilled at a few things but oblivious to too many others.

My perhaps crazy concern is shared by a few other radicals, including Clifford Stoll, a genuine Internet pioneer and aumitment, not good eye-hand coordination. He says that computers teach us to grudgingly accept what is presented to us, without really thinking or arguing. He says that computers promise information and power, the same things the devil promised Faust. Not surprisingly, Stoll, who has two small children, intends to shield them from computers' "evils." He also has no TV in his house.

My other concern is digital television (DTV), a revolutionary technology just being launched. First, let me freely confess (you'd find out soon enough anyway) that I think DTV is terrific, as is revealed in my article elsewhere in this issue. Without question, DTV will be the greatest thing since, well, since TV. Its exquisite picture and surround sound will make the viewing experience all the more real and enticing to the viewer. While even the best analog TVs must labor to engross the viewer, DTV can do it effortlessly, providing an immersive experience that is surely the precursor to virtual reality. My concern is this: if old-fashioned analog TV,

If analog TV, with all its drawbacks, consumes so many of our waking hours, how many more will digital TV consume?

thor of two bestselling books, The Cuckoo's Egg and Silicon Snake Oil. Worried about his near-addiction to computers, Stoll revolted and now heretically proclaims that computers can do more harm than good. At a time when every school is scrambling to buy more computers, Stoll argues against blindly believing that education's salvation lies in computers. He says that the Internet has become a dumping ground of untrustworthy information, a shallow and isolating place that encourages students to look busy when in reality they are just wasting time. He says that the only thing computers teach students is how to use computers, while they dull other precious skills. For example, young people's need to learn how to debate, to philosophize, to read and write analytically, and to make oral presentations is not well served by computers.

Stoll says the movement to use computers to make learning "fun" is a fraud. He argues that learning requires longterm discipline, responsibility, and comwith all its drawbacks, consumes so many of our waking hours, how many more hours will DTV consume? Can we possibly watch even more TV? When digital TV at last fulfills the grand synthesis of television and computers, will we become complete slaves to the screen? In the war for our eyeballs, will the tube finally win? I don't know, but it worries me.

Am I going to hurl my television out the window, along with my computer? Am I going to lie down in front of trucks delivering DTVs? No. These things are much too valuable. But I am going to try to restrict my vicarious, two-dimensional screen existence. I am going to try to live more three-dimensionally, reading more Shakespeare, spending more time looking at the night sky through my telescope, and taking longer walks in the park, listening to more bird songs.

Now, go and visit your uncle in the hospital, please. Don't worry, you can be home in time for *Frasier*. But after that half-hour, turn the damn set off. \Box

IOME THEATER

DAVID RANADA

Falling Off the Edge

WE RECENTLY RECEIVED an impassioned letter from Alberto Landron of North Wales, PA, bemoaning a "problem" he found with videotape copies of Steven Spielberg's *Jurassic Park*. His letter has opened up what could be a big can of brachiosaurs.

Mr. Landron compared an original standard release of *Jurassic Park* with its "widescreen" version on a THX-mastered VHS cassette, whose master tape was also used to create the widescreen laserdisc version. He found — and supplied two screen captures to prove it — that the "widescreen" version actually showed less of the image vertically than the panand-scan release.

The screen captures show a close-up of actor Sam Neill looking suitably harried at the approach of a dinosaur. In the standard version you can see from Neill's hairline down to below the topmost button on his shirt. But at the same point in the widescreen version, the image shows slightly more to Neill's sides but also cuts him off below the hairline and above the button. In Mr. Landron's words, "the black bars [at the top and bottom of the widescreen image] were actually taking away a fairly large portion of the picture! What's the big idea?!"

Mr. Landron thinks that movie companies "thought they could just throw at us 'widescreen lovers' some fake widescreen editions, and that we wouldn't notice! Shame on them!" Continuing in the same vein, he rails against promotions saying that you get the "whole picture" with widescreen. He ends with "How can we stop this horrible scam?!"

The problem at the root of Mr. Landron's observations is how to get a wide-

screen image to fit into a standard-width television screen. At first glance, there are only two possible solutions. You can show the entire widescreen image on the screen, a process known as "letterboxing." But this leaves a picture that doesn't fill the screen vertically, and the result is the tell-tale black letterboxing bars above and below the image. The other solution is to have the image fill the entire height of the screen, but that means the sides of the widescreen image have to be cropped out. Since there are times when dramatically significant action occurs at the sides of the picture, a full-height presentation has to slide its frame back and forth over the original widescreen image, a process called pan-and-scan.

Has Mr. Landron indeed uncovered a scam? Not in this case. The different vertical croppings of the image did not result from some vast Hollywood conspiracy to prevent us from seeing the whole cinematic truth. They resulted from two different director-supervised (or at least director-approved) transfers from film to

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HOME THEATER

video. What happened with *Jurassic Park* is part of standard industry practice, which can be considered an advantageous compromise between strict pan-and-scan and strict letterboxing.

The original film for much of *Jurassic Park* was shot in what is called, in modern cinematographic terms, "full-frame."

The film holds an image that is vertically larger than both the pan-and-scan and letterboxed versions. Shooting in this way has advantages in several areas. It permits the film's director, or the director of photography, to finetune the cropping after shooting is done. This can cut

down on the time and expense needed for an exact framing of a scene. And when it comes time to make the videos, having lots of "headroom" and "footroom" on the original image lets the director select *different* framings for the full-screen and widescreen versions. Even the supposedly definitive widescreen theatrical release can be considered a pan-and-scan version of the original full-frame film! (Fullframe versions, which may show mike booms or lighting cables, are *not* intended to be seen in their entirety.) Whether Mr. Landron and his fellow "widescreen lovers" like it or not, the decisions about how much of a filmed image to show in any version, theatrical or video, are not made to suit film buffs who may be concerned with noticing the minor details that fall off the edges. The various croppings are chosen with a single

Even the theatrical release of a movie can be considered a pan-and-scan version of the film.

goal — to tell the story so that its emotional power comes through.

Sometimes a pan-and-scan normalscreen video will show more headroom or footroom than the widescreen version. That's because the film's director has decided that preserving as much as possible of the scene's original width is more important to the story. And that is, in fact, the most common decision, since most dramatic interactions occur horizontally, between characters. Filling the full height of a TV screen while also showing as much as possible of the original scene's width requires essentially zooming out, a visual backing up that will of necessity show more headroom and footroom.

A really careful comparison of the standard and widescreen versions of *Jurassic Park* would have revealed even more differences. In a long phone call

with me, Dave Schnuelle, principal engineer for the THX digital mastering program, pointed out that while most of the movie was shot full-frame, 26 scenes were mainly digital special effects available only in a widescreen format. These scenes had no head-

room or footroom to back into. So when it came time to create the full-screen video release, standard pan-and-scan techniques had to be used in these scenes.

But making such a comparison, while good old-fashioned videophile fun, would be missing the point. Converting a movie to video is a variable process that's done, at least in the case of big-budget, majorstudio movies like *Jurassic Park*, under the director's control and with the primary intent of telling the story. Ignore the artifice and look for the art.

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Klipsch @ the Orpheum. The 3000-plus-seat Orpheum Theater in Memphis, TN, was recently chosen by Turner Broadcasting to show the digitally remastered movie. "Gone with the Wind." Recepturing the film's every nuance required a significant sound system upgrade.

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test report



Kenwood VR-2080 Dolby Digital/DTS Receiver

DANIEL KUMIN

n a world of boringly similar A/V receivers, the Kenwood VR-2080 isn't just a breath of fresh air — it's a veritable Arctic blast. For one thing, it isn't black; it's silver. Instead of the usual profusion of buttons and keys, there are only five, plus a power switch and a spinning dial to control volume and select inputs. And the VR-2080 is a good deal less bulky than most A/V receivers of similar wattage.

What really makes the VR-2080 stand out, though, is its remote control. Most remotes overwhelm you with a forest of similar-size keys. The Kenwood has only five, in three different sizes, plus a four-way joystick. Intriguing as the controls are, the real attention grabber is the four-inch (diagonal), blue LCD screen with its icon-based graphical user interface. Fiddling with this sci-filike device should give a thrill to any Trekkie or *B5* fan out there.

The Kenwood's rear panel is far more conventional, with three A/V in-

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RATED POWER 100 W x 5 into 6 ohms, all channels driven, at 1 kHz with no more than 0.7% THD; stereo, 100 W x 2 from 20 Hz to 20 kHz with no more than 0.03% THD

KEY FEATURES

- Dolby Digital, DTS, and digitaldomain Pro Logic decoding
- Graphical user interface on remote control using LCD screen, joystick, and two-way infrared communication with receiver
- Highly flexible system remote control DIMENSIONS 18 inches wide, 6³/₈ inches high, 15³/₈ inches deep
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puts (there's a fourth on the front panel to plug in a camcorder), only one of which has corresponding outputs for a recording VCR. You can forget about S-video or component-video connections — everything here uses standard composite-video. (Kenwood's flagship VR-2090 receiver has both componentand S-video connections as well as extensive multiroom capabilities.) There is a CD input and two audio tape loops. The speaker jacks are banana-plugcompatible, but the spacing doesn't allow U.S.-standard dual bananas.

A big plus is that there are *four* digital audio inputs, two coaxial ones hardwired to the CD and Video4 circuits and two Toslink optical connectors wired to Video2 and Video3. That's one or two more digital inputs than you'll find on many A/V receivers today — a most welcome addition. The absence of an AC-3/RF input for Dolby Digital laserdiscs is only a minor flaw. Because laserdisc isn't quite dead yet, though, Kenwood includes a coupon to order one of its outboard RF-demodulators, which begin at \$150 (these can also be ordered through its Web site).

Hookup was uneventful. The nonstandard banana jacks can bow in just enough to take dual bananas if you unscrew them all the way — surely not the recommended practice, but it's very convenient.



I played DVDs, CDs, and laserdiscs over a five-speaker suite that included a full-range front left/right pair of average sensitivity and high-performance center and surround speakers. For much of the audition period, I set the VR-2080 to drive the speakers full-range, to fully stress its amplifying capabilities. I also listened with a powered subwoofer added to the system.

The VR-2080 had enough power in two-channel mode to play amply loud before I heard audible strain. It should provide plenty of power for most stereo speakers in most rooms. Played at just about the highest level I might ever contemplate, however, dynamic rockcombo recordings like Mighty Sam McClain's Give It Up to Love (JVC) began sounding slightly hard and a bit "spitty." But in the multichannel digital modes, as with the DTS CD of Vince Gill's High Lonesome Sound, the VR-2080 effortlessly kicked out clean, powerful full-range sound at nearly 100 dB sound-pressure level (SPL). Playback had impressive punch and the surreal, squeaky-clean spaciousness that only studio-grade digital reverb mixed to multichannel can create.

The latest "VR² Virtual Reality" Dolby Digital music production from Delos's John Eargle, DVD Space Spectacular (DV 7003), includes full performances of Holst's The Planets and Strauss's Also sprach Zarathustra by the Dallas Symphony under Andrew Litton. However bored you might be with these pieces — and in my case, that's thoroughly this DVD will make you sit up and take notice. If you're too jaded to admire the bangs and crashes, note instead how discrete multichannel helps reveal the skeins of Strauss's meander-

ing chromatic counterpoint. The VR-2080's ability to render spatial detail and dynamic range almost

IN THE LAB

DOLBY DIGITAL (AC-3) PERFORMANCE All data obtained from Dolby Labs' AC-3 test DVD using dithered test signals, which set limits on measured distortion and noise. All channel-level controls and LFE attenuation set to 0. All speakers set to "large." Reference input level is –20 dBFS* unless otherwise stated; reference output level is 2.83 volts (1 watt into 8 ohms). All are worst-case figures.

Output at clipping (1 kHz, 8/4 ohms) one channel driven (front)117/186 W one channel driven (surround)....128/196 W five channels driven (8 ohms)50 W**

Distortion at 1 watt (THD+N, 1 kHz)	
8 and 4 ohms0.02/0.0	4%
Noise (A-wtd)	

left surround		uБ
Excess noise	(with signal)	

16-bit (EN16)+3.75 dB Frequency response (20 Hz to 20 kHz)

left surround+0, -0.7 dB

Channel imbalance (individual channels set at 0-dB gain)0.5 dB spread

Subwoofer output frequency response about 13 dB/octave rolloff above 71 Hz

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Maximum unclipped subwoofer output 10.5 volts

* decibels referred to digital full-scale

** approximately 50 watts available at all channels simultaneously for bursts of 1 to 2 seconds; longer durations induced asymmetrical clipping

*** all six channels driven by 30 Hz at 0 dBFS

DTS PERFORMANCE

All test signals obtained from DTS demo/test CD using the digital input. The signals originated in the analog domain and may contain inherent distortion and noise. Volume-control setting was the same as for Dolby Digital. All speakers set to "normal." Reference input level is –16 dBFS*; reference output level is 2.83 volts (1 watt into 8 ohms). Figures are worstcase.

Frequency response (15 Hz to 20 kHz) all channels.....+0.1, -0.8 dB

Distortion at 1 watt (THD+N, 1 kHz) left/right front.....0.07%

STEREO PERFORMANCE, DIGITAL INPUTS Reference volume setting for noise is the

Erequency response
10 kHz±7 dB
100 Hz+9, -8 dB
Tone-control range
16-bit (EN16)+4.25/+4.25 dB
Excess noise (with/without signal)
Noise (A-wtd)71.2 dB
Linearity error (at -90 dBFS*)+1 dB
same as for Dolby Digital; subwoofer off.

Frequency response 20 Hz to 20 kHz +0.1, -0.2 dB defy description — "thrilling" would not be an inappropriate adjective. And the receiver sounded like it had plenty of reserves to maintain these performance levels with full-orchestral sur-

The Kenwood VR-2080 receiver's unique remote control is like an on-screen graphical user interface, except you don't need a TV set.

> round recordings played in most systems. I did wonder, however, if the topoctave sound was as refined and detailed as I'm used to from my everyday 5.1-channel electronics, which cost about four times as much as the VR-2080. Either way, the Kenwood sounded very good in its own right.

Regardless of what disc I threw at it — PCM stereo CD, Dolby Digital DVD, or DTS CD — the VR-2080 (with its digital inputs set to "auto") reliably selected the appropriate playback mode. This hasn't been true of every Dolby Digital/DTS processor that I've tried. And I encountered no glitches or noise bursts upon initiating play of DTS discs. (Some of the credit, however, should go to the late-model DVD/CD player I used.)

Dolby Pro Logic performance was fine, with hardly any channel leakage and superbly quiet sound when I used the digital inputs. (Playback through the analog inputs was a bit noisier but still very good.) The five ambiencesynthesis modes were less offensive than many such - no added reverb. Radio performance was satisfying from strong or local stations, with adequately clean and dynamic sound. The VR-2080 could not pull in an acceptable signal from any of my fringe stations, so I have to rate its weak-signal performance as below average. AM reception was average. I could tune four or five intelligible stations with the supplied loop antenna.

Performance-wise, the VR-2080 is competitive in all areas, and perhaps a touch better than that in a few. An \$800 Dolby Digital/DTS receiver that can deliver 100 watts into five channels

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THE ULTIMATE IN HIGH-PERFORMANCE SOUND"



would be worthy of note for value alone, even if it was otherwise as conventional as a Chevrolet. Once you move beyond basic performance, however, several of the Kenwood VR-2080's controls and features are unique. Most notable is the remote — an 8 x 4inch module that's equally suited to handheld or tabletop operation. The buttons control power, volume, mute, and "confirm" - the last a wake-up call that refreshes the display. You can leave the screen back-lighting on or turn it off to increase battery life. Either way, the screen goes blank after 10 seconds if you don't enter any commands.

This remote is very much like an onscreen graphical user interface, except here the icons and "virtual" buttons are displayed on the remote's LCD rather than on a TV screen. One big advan-



The VR-2080 brought out the spaciousness and "punch" of the DTS version of Vince Gill's *High Lonesome Sound*.

tage of this approach is that you don't have to fire up the video display when you just want to listen to music. Perhaps more important, it creates a powerful psychological connection between what you're doing with your hands and where you're looking with your eyes, making the remote easier to learn.

The remote's graphics follow a hierarchical arrangement. That is, first you use the joystick to select from a double row of icons across the top of the LCD that represent source components, input modes, and the main menu. Each selection causes additional icons and virtual controls to appear on the lower twothirds of the screen; complex components like DVD players can have four or more such linked screens.

During setup, you first identify each source component connected to the VR-2080 by entering its code from the supplied multibrand list. The remote

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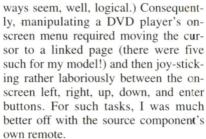


then adds the appropriate icon to the upper two rows, which when you're done show only the sources actually connected to your receiver. On the lower two-thirds of the screen, instead of generic labels such as Video2 and Video3, you'll see DVD or VCR.

For example, after I set up the Video2 input for my laserdisc player, the icon read LD, and the screen had "keys" for standard transport controls, side selection (A or B), and power on/off as well as a tendigit numeric keypad. A Mode key called up another screen containing virtual buttons for display, repeat, programming, and so on. Unfortunately, linked keys, as in the sequence above, aren't distinguished visually. Also, the top-row selectors do not change. If the system is set to Tuner and you want to play a DVD, you have to remember that Video1 is the DVD input. The DVD label only appears after you select the icon.

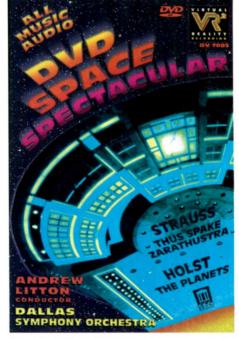
This nifty remote-control system is a dramatic improvement over the usual hundred-plus-key nightmare, but it's a double-edged sword nonetheless. On the one hand, most of what you need is right in front of you, or at most a few clicks away, and it's beautifully legible, navigable, and, on the whole, selfprompting. On the other hand, getting to the function you want can be a pain in the neck. Tuning in a radio station,

for example, can easily require going through a dozen or so rocks and clicks with the joystick. Also, the screen cursor blinks rather slowly, so I sometimes had to wait a while to be certain where I was. (And the logic of how the cursor "wraps" from side to side or top to bottom did not al-



Don't get me wrong: I did learn my

36 STEREO REVIEW DECEMBER 1998



The VR-2080 thrillingly rendered the spatial detail and dynamic range of this music DVD.

way around the VR-2080's interface fairly quickly, and I must say I enjoyed it quite a bit. This very powerful system includes extensive macro capabilities, is compatible with X-10, Lutron, and Makita home-automation accessories, and can also control a whole system of Kenwood components. And it's a *twoway* infrared system. The LCD screen can display data downloaded from the receiver, such as the frequency of the

HIGH POINTS

Unique two-way remote with large graphical display. Unusual styling. Four digital audio inputs. Ver/ good value.

LOW POINTS

Many-layered menu system is occasionally laborious to use. No S-video connections. currently tuned radio station. Used with a compatible 200-CD Kenwood changer, it can display CD titles and even song-title data from CD-Text recordings, as well as information that you've entered into the CD changer's memory for "oldfashioned" textless discs.

The Kenwood VR-

2080's user interface isn't perfect, but it is a daring departure from the norm. (I believe several of the flaws could be answered by the addition of a physical ten-key pad and by upgrading the remote to control the source components' on-screen systems.) The joystick remote makes operating this entirely competent, up-to-the-minute, and surprisingly high-value digital A/V receiver both easy and fun.



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Marantz DR700 CD-R/RW Recorder

DAVID RANADA

fter laying fallow for several years, the recordable-CD field is practically sprouting machinery. Marantz's DR700 is the third CD recorder I've tested in a year, and there are more coming. Perhaps the sudden interest stems from the introduction of the erasable/rewritable CD-RW format. Among other things, these discs allow you make test dubs before you "burn" a recording on a permanent, nonerasable CD-R. As you'll see, the availability of a CD-RW is essential to the usability of the Marantz DR700.

Like other CD recorders, the DR700 is very much like a normal CD player with the addition of a recording function. It has many of the standard CDplayer features, including 20-track programmed playback, automatic repeat (track, disc, programmed sequence), a front-panel headphone output with volume control, a remote control with numerical keypad for cueing by track number, and an informative front-panel display.

As a recorder, the DR700 is less complicated than a high-end cassette deck (rather rare beasts nowadays). It has inputs and outputs in both analog and digital form, the latter in both coaxial and optical flavors, a front-panel recording-level control for the analog inputs, and a bunch of buttons to control the various recording functions. Among these last are an input selector, controls to erase either the last track recorded on a CD-RW or the entire disc, and a CD-Sync control that starts a dub automatically when a signal appears at the digital inputs. Besides the normal track/ time readout, the front-panel display has indicators for the various recording operations as well as a set of recordinglevel meters.

If you have the opportunity to dub

FAST FACTS

HIGHLIGHTS

- Bit-accurate CD copying
- Multiple digital inputs
- Remote control

• Sampling-rate converter DIMENSIONS 171/a inches wide, 41/2 inches high, 12 inches deep WEIGHT 91/4 pounds

PRICE \$850

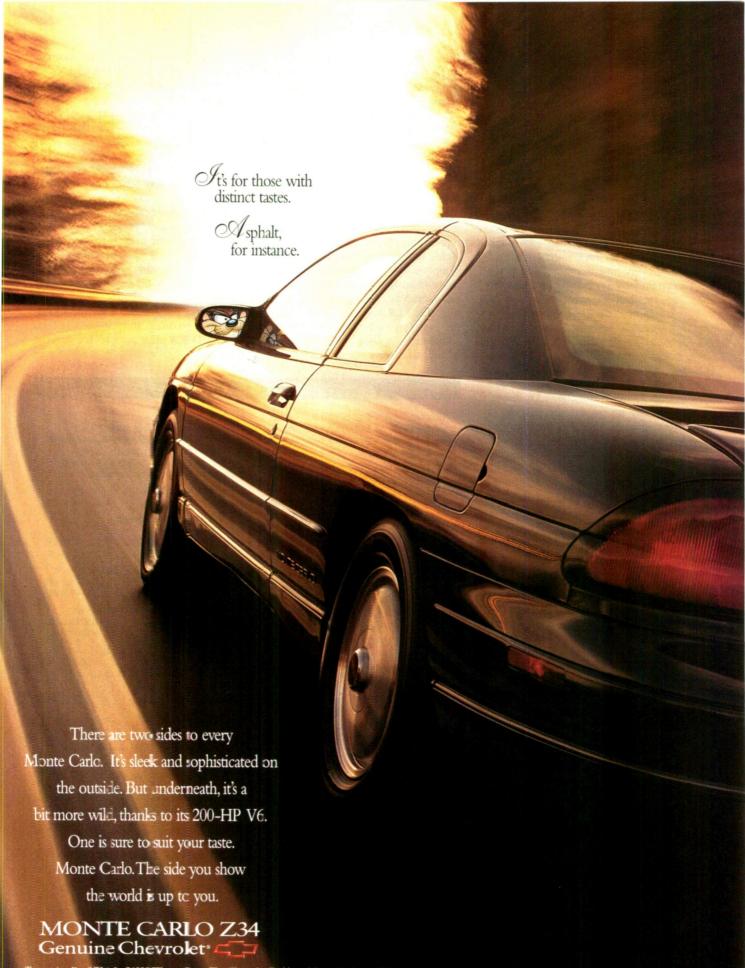
MANUFACTURER Marantz, Dept. SR, 440 Medinah Rd., Roselle, IL 60172; phone, 630-307-3100; Web, www.marantzamerica.com material recorded on DAT with a 32- or 48-kHz sampling rate, you'll appreciate the DR700's automatic sampling-rate converter. It converts incoming digital data at any sampling rate between 32 and 48 kHz to the CD standard of 44.1 kHz. While this process will add a little noise to the converted signal, it is far preferable to dubbing a digital original in the analog domain, which adds much more noise as well as distortion and frequency-response irregularity.

Unlike other CD recorders with sampling-rate converters, the DR700 will pull its converter out of the circuit if it detects a digital signal with a 44.1-kHz sampling rate, as from a CD player. As a result, the DR700 is capable of bit-accurate dubbing of CDs and other 44.1kHz-sampled material.

As you might expect, digital dubs made on the DR700 sounded precisely like the originals, whether played back on other players or reproduced by the DR700 itself. Dubs of analog material also came out sounding just like the originals. And, given the quality of the lab-test results, I would expect that even recordings of live music made on the DR700 will sound excellent.

The controls on the front panel as well as the remote were easy to use except for one minor inconvenience: there is no one-button way to cue back to the beginning of the track you are playing. To restart Track 2, for example, you have to either jump forward to Track 3 and then back to Track 2 or jump back to Track 1 and then forward to Track 2.

What proved to be the DR700's one *major* inconvenience does have a frontpanel button. The Auto/Man control



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testreport

HIGH POINTS

Easy to use. Very good sound quality.

LOW POINT Can shut off during recording.

turns automatic track numbering on or off. (You cannot insert or remove track numbers after recording a CD, as you can with both DAT and MiniDisc.) With an analog input and auto-tracknumbering on, track numbers are inserted every time the signal falls below a certain level for between 3 to 20 seconds and then comes up again.

I measured the DR700's track-number threshold level and found it to be around -39 dB below a 0-dB full-scale indication on the front-panel level meters. While -39 dB is on the soft side, it is definitely not "silence," as the manual calls it. When you copy CDs through the analog inputs, the result could be many spurious track numbers, depending on the music. But for most users, this will still be a relatively minor inconvenience because they will usually dub CDs through digital connections, in which case the track numbers are transmitted over the data link and recorded as they occur in the original material.

I've found, and commented on, this same auto-track-marking behavior in other CD recorders. However, in the DR700 Marantz has added a twist that makes it more than just annoying. During analog *or* digital dubbing, if the signal falls below that -39-dB threshold for more than 20 seconds, *recording will come to a sudden stop*.

This "feature" is clearly designed to prevent you from inadvertently filling a disc with silence if you forget to stop the recorder at the end of what you want to record. Although I understand the rationale, I cannot see how any recording that is interspersed with 20second silences would be enjoyable to listen to. (The manual admits as much: under "Fixing Problems" you'll find "20 second pause between recordings.") Worse, the -39-dB threshold for digital-input "silence," which proved to be an annovance with respect to automatic track numbering, is sometimes fatal with respect to the DR700's ability to dub music.

Of the dozen pop discs I tried, I found only one that turned off the DR700 in this way, Janet Jackson's *The*

Velvet Rope (Virgin), but such discs surely exist given the sonic variety of pop genres. And in classical music, especially Wagnerian and post-Wagnerian orchestral music, periods of intense stillness abound.

Few may regret the DR700's turning off during such esoterica as Henze's Barcarolle per grande orchestra or Pärt's Cantus in memory of Benjamin Britten, which it did. But many more users will be turned off by the turn-offs that occurred in Tchaikovsky's "Pathétique" Symphony, most of Shostakovich's symphonies, and all of Mahler's symphonies. You can add to this already imposing list the most notorious pianissimo beginning of all crossover hits, that of Ravel's Boléro, as well as the super-mega-blockbuster-crossover soundtrack to Titanic, which capsized in mid-datastream during Track 11.

You can always switch the recorder to manual track marking in such cases of wide dynamic range, but that obliges you to babysit the dubbing process to enter track numbers manually. And you can always perform a test dub on an erasable CD-RW to prevent the abortion of a dubbing operation and the spoiling of a CD-R blank. But these measures severely compromise the convenience of the DR700 in the face of other CD recorders that don't have an automatic turnoff "feature."

If all you want to copy is consistently loud music, or if you are willing to put up with the possibly onerous burdens of manual track numbering, I can heartily recommend the Marantz DR700 as an otherwise easy-to-use and fine-sounding CD recorder. But I'd keep at least one CD-RW disc around for making test dubs.

IN THE LAB

CD PLAYBACK

All measurements were made from the player's analog output, with all test signals from *Stereo Review*'s test CD-R. The signals are dithered, which sets limits on distortion and noise performance.

(0-dBFS* input)1.93 volts

MAXIMUM OUTPUT

(20 Hz to 20 kHz)

FREQUENCY RESPONSE

All measurements were made from the player's digital output and represent how a disc dubbed on the DR700 will play back on a theoretically "perfect" CD player. For all measurements except input sensitivity, the recording-level control was set to produce a 0-dBFS* recording from a 2-volt input.

INPUT SENSITIVITY (to produce a recorded 0-dBFS level) record level full up.....0.56 volt

FREQUENCY RESPONSE

DIGITAL-INPUT RECORDING

ANALOG-INPUT RECORDING

Tech Notes).

Bit-perfect at 44.1-kHz sampling rate

except for pre-emphasized material (see

20 Hz to 20 kHz+0.01, -0.15 dB

NOISE LEVEL

at -20-dB input level0.0	319	%
LINEADITY EDDOD		

LINEARITY ERROR at -90-dB input level.....-0.43 dB NOISE MODULATION0.66 dB

normal (de-emphasis off) ...+0.15, -0.15 dB de-emphasis on.....+0.31, -0.75 dB NOISE LEVEL (A-wtd, re -20 dBFS input) normal (de-emphasis off)-75.1 dB de-emphasis on.....-77.6 dB EXCESS NOISE (without/with signal) 16-bit (EN16)+0.9/+0.5 dB guasi-20-bit (EN20)+12/+12 dB **DISTORTION** (THD+N, 1 kHz) at 0-dB input level0.0055% at -20-dB input level0.027% LINEARITY ERROR at -90-dB input level.....-0.13 dB NOISE MODULATION0.5 dB DEFECT TRACKING (Pierre Verany test disc).....2,000 µm

* decibels refered to digital full-scale

TECH NOTES

Results of our bench tests showed that as a CD player, the DR700 was very good, with low background noise. It also made very fine recordings through its analog input — equal to or better than consumergrade DAT machines (and recordable CDs are more robust physically and more reliable than DATs). Dubs made through the digital input at the CD-standard 44.1-kHz sampling were perfect clones of the originals. For a current-generation CD player, the DR700's de-emphasis error was rather large and dominated by a wide, -0.75-dB dip in the upper midrange/lower treble. This error will probably be audible in direct comparison with a player that has a flatter de-emphasis response. Pre-emphasized CDs have always been rare, however. Blank discs were from TDK. -D.R.

test report



Legacy Accent Speaker

DANIEL KUMIN

egacy Audio may not qualify as a household name even among serious hi-fi fans, but for 15 years the company has steadily increased both its visibility and its range of high-end loudspeakers. Legacy was founded in 1983 by Bill Dudleston, a (then) chemical engineer with a serious woodworking hobby and an addiction to fine sound, a combination that just about automatically spells s-p-e-a-k-e-r m-a-k-e-r.

Legacy has no dealers or stores of its own but sells its products factory-direct only, offering a ten-day home trial period, after which a customer can return the speakers for a full refund (less shipping) if not satisfied. In 1996, however, Legacy allied with the Allen Organ Company and now features "audition sites" at Allen retail facilities in 13 markets in the U.S. and British Columbia. Whether you order direct or at an audition site, the price is the same.

While several of Legacy's top models feature unusual design elements, the new Accent, its least costly floor-standing speaker, is more conventional. The test pair arrived, in first-class condition thanks to excellent packing materials, wrapped in an elegant rosewood veneer, one of three premium finishes available. Finish quality was first-rate, with a fine-furniture craftsmanship that comes within a hair of the best woodworking you'll see on a loudspeaker ---this is, after all, a Legacy hallmark. The Accent grille, in basic black, covers about three-quarters of the front panel. It has a curved bottom and a rosewood insert for the Legacy logo. It's nice but a bit fancy for my taste, and I left the grilles off for all my listening because I felt that they audibly roughened the response just slightly.

The Accent has a second tweeter on the back, mounted directly opposite the front one and firing rearward. This trick helps to even out in-room power response by compensating for the increasingly "beamy" output with rising frequency that's typical of dynamic drivers. It also adds an extra dollop of spaciousness, since at tweeter frequencies the speaker is, effectively, a bipolar radiator. The two tweeters are identical, with very shallow, hornlike waveguides and centered diffusers that also handily serve as poke-guards.

The Accent is veneered on all five visible surfaces. The bottom is covered in glossy black laminate and fitted with four heavy, brass screw-in spiked feet. The back panel's recessed terminal cup is near the bottom. Along with a single pair of heavy multiway binding posts, there are miniature switches marked Bass Trim, Treble Trim, and Rear Defeat (more on these later). Ports are located low on both the front and back panels. Their snap-in plastic throats are the only unimpressive parts of the speakers in terms of fit and finish.

For my listening sessions I connected the Legacy Accents to two channels of a 150-watt-per-channel multichannel power amp. The program source was a high-performance CD/DVD player. I used an equally fine A/V preamp/processor — operating in its plain-stereo, line-direct mode — for volume control.

My initial impression was that the speakers' sound was very smooth, neutral, and easy to listen to. Voices were admirably open and free from obvious midrange effects such as honking, hooting, or cupping. The midbass range sounded warm and punchy without excessive boom or bloom. I initially

FAST FACTS

DRIVER COMPLEMENT 7¹/₂-inch cone woof¢r, 7¹/₂-inch cone midrange driver, two 1-inch titanium-dome tweeters ENCLOSURE ported SIZE 'HXWXD) 40 x 10 x 10 inches WEIGHT 56 pounds

FINISH

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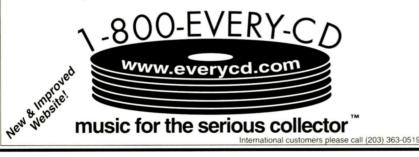
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HIGH POINTS

Very nice woodworking. Highly accurate vocal region. Extra-spacious soundstage.

LOW POINTS Less than pinpoint imaging. Faintly warm midbass.

found the top-octave treble a bit laidback. Noting that the Accent is a tall speaker with a fairly high tweeter center (about 40 inches from the floor), I tried unscrewing each cabinet's two rear feet a few turns to tilt it down a bit. This helped a good deal at the main listening position, noticeably adding "air" to the sound of cymbals, brass ensembles, and the like.

The rear-panel switches arrived set so that the bass and treble were both "trimmed" and the rear-firing tweeter was defeated. After considerable experimentation, I settled on leaving the Treble Trim off and the rear tweeter on. The Accents simply sounded fuller and more detailed with both tweeters running and without the treble-cut filter. However, I preferred to leave the Bass Trim switch on because it made the speakers sound a tick tighter and more extended.

While the lateral listening window was quite generous, aligning my ear to the speakers in the vertical plane paid off. If I stood up, the sound took on a discernibly narrower cast; if I sat on the floor the effect was more or less opposite — richer but a bit boomier. Tilting the Accents downward helped to aim them more directly at my ears.

Tweaking completed, I settled in for some wide-ranging listening. The excellent blues vocals of Keb'Mo' (Kevin Moore to his mom and dad) on the singer's 1994 debut CD (Okeh) sounded beautifully open and warm, yet detailed. That set me off on an effort to trip up the Accents' voice reproduction - to no avail. All of my usual, longtime vocal touchstones, from James Taylor to soprano Jan DeGaetani, correlated just about dead-on with the mental images of their vocal timbres I've formed over hundreds of listening sessions. These speakers were very accurate and smooth throughout the vocal region.

In the bottom octaves the Accents sounded quite fine as well. In my room, bass response was more than solid down to 45 Hz or so, then fell off



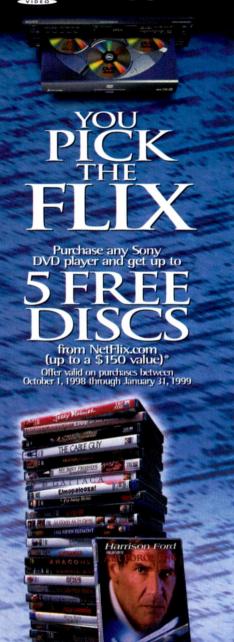


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smoothly. A narrow touch of upperbass warmth remained, which neither the Bass Trim switch nor my usual placement tricks could entirely mitigate. It tended to make things like cellos sound very slightly overrich, though not annoyingly so, on a favorite recording of Beethoven's early quartets by the Alban Berg Quartet (now in EMI 54587 and 54972).

The upper-bass warmth was a bit more evident on mainstream pop, as most of this is still mixed for car radios, with lots of energy in the 120-Hz zone. For example, James Taylor's Hourglass (Columbia) is a superb commercial recording but has a bit of a 100-Hz hump; it still sounded great, but with almost too much of a good thing. By contrast, similar Fender-bass sounds from Give It Up to Love by Sam McClain, an "audiophile" CD from JVC (XRCD-0012) seemed to be balanced just about right and was consequently noticeably more defined and "snappy" down low. Extension into the true deep bass was very respectable for a speaker with just two 7¹/2-inch cone drivers. The Copland Fanfare for the Common Man on Delos's Surround Spectacular CD (played in two-channel) came off nicely.

The Accents' stereo soundstage was about medium-wide and rock-steady. Localization of instruments from left to right did not seem as tight as I've heard from some other speakers (neither does real life, usually), but it was not as diffuse as I has expected. In the depth dimension the speakers were quite impressive, with a slightly but decidedly enhanced sense of stage-depth. At least some of this I would attribute to the bipolar contribution of the rear tweeters. An excerpt from the Shostakovitch Tenth Symphony on the Delos Engineer's Choice II CD (DE 3512) demonstrated this graphically: With the rear driver on, each accented string attack carried with it a sort of "halo" of ambient hall sound; this was noticeably less pronounced with the second tweeter disabled. How literally "realistic" the effect might be I can't say, but I found it an attractive subjective enhancement to the live-orchestra "feel."

The Accents played amply loud with moderate power and sounded punchy and solid. However, at very high volumes — what most listeners (including me) would consider excessive for daily use — the upper midrange became a touch harsh and midbass sounds began to "lag" perceptibly. (At these levels the upper-midrange element might well

44 STEREO REVIEW DECEMBER 1998

have been amplifier clipping, or simply acoustic overload of my ears.) That's not to say the Accents didn't rock they did. The New York Rock & Soul Revue's rendition of "Knock on Wood" on *Live at the Beacon* (Giant) rocked hard, and within this recording's limits (excellent bottom end, so-so treble), it sounded great. But if recreating arena rock is your daily bread, a pair of Accents is probably not your best choice — a point I imagine Legacy would cheerfully concede.

The Legacy Accent is a very good loudspeaker playing on a very tough field. The \$2,000-a-pair slim-tower category is a crowded one, and because it tends to define the gateway to the "high end," serious listeners usually expect a lot. Legacy delivers it with the Accent. There are easily a dozen generally similar speakers from respected makers in the same price range. Compared with those I've auditioned recently, the Accent holds its own very well sonically and does a bit better than most in terms of styling and finish. If you live near one of Legacy's 13 regional audition centers, or are comfortable sampling on home trial, it's decidedly worth the effort to give the Accent a listen.

IN THE LAB

Tested as it was listened to, except with the grille cloth on, with both the tweeters running and without the Treble Trim filter, the Accent produced its flattest response above 1 kHz in our averaged "listening-window" guasianechoic frontal measurement. Much of the measured deviation of ±3.7 dB from 1 to 13 kHz could be interpreted as a slope downward over that range. Switching in the treble filter increased the slope, further reducing tweeter output at 10 kHz by some 2 dB. Switching the rear tweeter off had a negligible effect on the frontal response, though it helped flatten the speaker's omnidirectional power response somewhat.

Removing the grille produced a listening-window response with a slightly different shape but the same overall deviation. The Bass Trim control raised or lowered the bass output by around 2 dB at 75 Hz, which produced a less audible effect than the Treble Trim control with much of the program material I tried. — David Ranada

SENSITIVITY (SPL at 1 meter, 2.83	
volts input, 1 kHz)92 o	dB

IMPEDANCE

(minimum/nominal).....3.3/6 ohms

BASS OVERLOAD FREQUENCY (at 90/100 dB SPL)none/50 Hz



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5 DVD CHANGER

testreport



Onkyo TX-DS555 Dolby Digital Receiver

KEN C.POHLMANN

uying an A/V receiver is easy, right? If money is no object, then it's a piece of cake. But if you have to think before you spend some dollars on home theater equipment, then finding the right A/V receiver can be a challenge. Do you look for power output? Or is it a robust feature set that's most important? Maybe it's stylish looks you're after?

Well, Onkyo's TX-DS555 receiver is a fairly industrial-looking Dolby Digital receiver. That's not necessarily a bad thing, but if rosewood side panels, a glossy finish, and gold-plated knobs are what you're after, you'll have to look elsewhere. The TX-DS555 sports a utilitarian face with a relatively consolidated control set. However, it proves once again that you can't judge a receiver just by looking at its face — this one hides a number of goodies under its shell. For example, its five amp chan-

FAST FACTS

RATED POWER 70 W x 5 into 8 ohms from 20 Hz to 20 kHz with no more than 0.08% THD

KEY FEATURES

- Dolby Digital and digital-domain
 Pro Logic decoding
- Front left/right bass and treble controls
- One optical, two coaxial digital inputs
- Three A/V inputs (two record loops)
- Two audio tape loops

DIMENSIONS 171/a inches wide, 67/a inches high, 153/a inches deep WEIGHT 241/4 pounds

PRICE \$599

MANUFACTURER Onkyo USA, Dept. SR, 200 Williams Dr., Ramsey, NJ 07446; phone, 201-825-7950; Web, www.onkyo.co.jp nels are rated at 70 watts apiece, and it packs number crunchers for Dolby Digital and Dolby Pro Logic decoding as well as ambience-effects processing. In other words, it appears that Onkyo attempted to put its design money where it would count most.

Although I called the front panel utilitarian, I don't mean to imply that it's bare — far from it. There are plenty of gizmos to keep even busy fingers happy. You'll find a king-size volume knob (measuring a full 2 inches in diameter) for those quick, in-the-dark level changes. There are independent knobs for bass and treble, but they affect only the front left/right speakers. (Traditionalist that I am, I like knobs for these functions, and don't like to search through layers of menus just to dial up a treble boost.)

The tuner section offers a total of 30 AM/FM presets that you can assign to three groups. For example, you could store presets by format (pop, classical, and talk, perhaps) or by user (his, hers, and things-we-can-both-agree-on, say). In addition, you can input and assign an eight-character label to each station preset. It's worth taking the time to enter as much into the nonvolatile preset memory as you can. And it's easy to do thanks to a dimpled rotary wheel

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dubbed the Smart Scan Controller, which is used not only to access presets and dial in labels but also to select various setup parameters as well as other functions.

Other perks of the TX-DS555 include a Midnight Theater button to reduce the dynamic range for Dolby Digital sources, a 3-D Bass (loudness) button, and a headphone jack. Last but not least, the dot-matrix fluorescent display can be set for high, normal, or low brightness to match your mood, or at least your room's mood lighting. The only thing of significance missing from the front panel is an A/V input for convenient camcorder hookup.

The rear panel supplies all of the basic inputs and outputs. On the audio side, it can accept signals from a CD player, two tape decks, and a turntable. A grouping of six jacks accepts 5.1-channel analog input from a DTS or other external 5.1-channel decoder. There are three A/V inputs, none of which support S-video. For the best picture, you might want to forego the convenience of central video switching (normally a significant advantage of using an A/V receiver for home theater)

IN THE LAB

DOLBY DIGITAL (AC-3) PERFORMANCE All data obtained from Dolby Labs' AC-3 test DVD using dithered test signals, which set limits on measured distortion and noise. All channel-level controls and LFE attenuation set to 0. All speakers set to "large" except for subwoofer-output measurements. Reference input level is -20 dBFS* unless otherwise stated; reference output level is 1 watt into the specified impedance. The resulting volume-control setting was approximately 10 o'clock. All are worst-case figures.

Output at clipping (1 kHz, 8 ohms)		
one channel driven95 W		
five channels driven70 W		
Distortion at 1 watt (THD+N, 1 kHz)		

right front.....0.042%

Noise (A-wtd) center71.8 dB
Excess noise (with signal)
16-bit (EN16)6.45 dB
Frequency response (20 Hz to 20 kHz)

left front+0.08, -0.96 dB

Channel imbalance (individual channels set at 0-dB gain).....0.19-dB spread

Subwoofer-output frequency response about 22 dB/octave rolloff above 80 Hz

High-pass-filter frequency response 12 dB/octave rolloff below 80 Hz

Maximum unclipped subwoofer output 1.21 volts

Subwoofer distortion (subwoofer-output level set to -16)0.32%

* decibels referred to digital full-scale

Reference input and output levels are the same as for Dolby Digital. Resulting volume setting was approximately 11 o'clock. Output at clipping (1 kHz, 8/4 ohms)......92/126 W Distortion at 1 watt (THD+N, 1 kHz).....0.028% Linearity error (at -90 dBFS*)-0.1 dB Noise (A-wtd)-73.7 dB Excess noise (with/without signal) ..+2/+2 dB 16-bit (EN16)..... 20-bit (EN20)+17.61/+17.81 dB Noise modulation.....0.5 dB **Frequency response**

STEREO PERFORMANCE,

DIGITAL INPUTS

20 Hz to 20 kHz +0.09, -0.45 dB

TUNER SECTION

All figures except frequency response are for FM only.

Sensitivity (50-dB quieting) mono stereo	
Capture ratio (at 65 dBf)	1.2 dB
AM rejection	70.9 dB
Selectivity alternate-channel adjacent-channel	
Frequency response	

FM30 Hz to 15 kHz +2, -0.95 dB AM30 Hz to 3 kHz +1.1, -10.6 dB

TECH NOTES

Lab tests showed the Onkyo TX-DS555 receiver to be quite a solid performer within its comparatively modest power ratings, and even those were comfortably exceeded in stereo operation. Also noteworthy were the measured noise levels in stereo and Dolby Digital operation: noise was usually inaudible at normal volume settings and unusually low for a receiver at any price. Although the volume control is a smoothly moving knob, measurements revealed that it changes levels in 1-dB steps. As long as you keep the subwoofer-output level control set at -16 or lower, the output will overload at normal to moderately loud volumes. If necessary, adjust the subwoofer level on the sub itself. — David Ranada

and connect your DVD player or satellite receiver directly to your TV's Svideo input. One neat feature of the receiver is its Intelligent Power Management system, which automatically turns the receiver on or off whenever the device connected to its Video-2 input is turned on or off.

On the digital side, there are one optical and two coaxial audio inputs. Although I personally always like to see more, three digital inputs should be adequate for the kind of basic home theater systems the TX-DS555 seems to be intended for.

The receiver offers a line output for connection to a powered subwoofer, but there are no preamp outputs for the five main channels. Binding posts are provided for the front speaker outputs, with spring-loaded clips for the surrounds and a remote set of stereo speakers.

Miracle of miracles, the remote control's lettering is highly legible. Unlike most remotes, which use nearly black lettering on a black background, this one has black lettering on white, blue, and yellow backgrounds. Instead of pressing randomly and hoping for the best, you can actually see what you're doing! Moreover, this learning remote gives you the power to control most of the receiver's functions as well as those of compatible components hooked up on Onkyo's RI control bus.

Unlike some receivers, the TX-DS555 doesn't have any provision to trim the analog inputs so that different sources appear at the same loudness. Also, the controls on top-of-the-line A/V equipment have a certain solid, silky smooth feel to them that the controls on this receiver lack.

Installing the TX-DS555 didn't pose any problems. Indeed, its somewhat limited flexibility made setup rather easy. The speaker-setup procedure, for example, is straightforward. Using the scan wheel and the dot-matrix display (there is no on-screen display), it's easy to select such bass-management options as subwoofer (yes/no), front speakers (large/small), center (large/small/none), surround (large/small/none), and so on. However, certain selections limit others. For example, if you select "no" for the subwoofer, the system automatically selects "large" for the front speakers, and if you select "small" for the front speakers, you cannot select "large" for the surrounds. The limitations seem logical, and I've seen plenty of receivers with more arbitrary and limited bass

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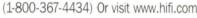
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HIGH POINTS

Good value. Excellent Dolby Digital and Pro Logic performance. Reasonable power.

LOW POINTS

No S-video inputs or outputs. Only three digital inputs. No on-screen display.

management. But if you need something unusual, such as front "small" and center "large," forget it. The timealignment and speaker level-setting procedures are conventional. You can use the remote control for level setting, an important convenience.

I started my audition of the TX-DS555 with Delos's latest audio-only DVD-Video disc, *DVD Space Spectacular* (DV 7003), which contains orchestral recordings in both 5.1-channel Dolby Digital and two-channel stereo of Strauss's *Also sprach Zarathustra* and Holst's *The Planets*. As I always find with recordings engineered by John Eargle, the sonics are both natural and excellent. The multichannel presenta-

tions are wonderful, providing a realistic sense of how the Dallas Symphony sounds performing in the Meyerson Center. As I switched between multichannel and stereo playback, there was no question that the addition of center and surround channels blows away simple two-channel playback. I've said it before and I'll say it again: Stereo is the past. Surround sound is the future.

The TX-DS555 did a firstrate job of decoding the Dolby Digital soundtrack and delivering it with authority to my five B&W DM302 satellite speakers and Sunfire True Subwoof-

er. It decoded the bitstream as reliably as a high-price receiver. More to the point, the TX-DS555 had enough power to drive the speakers to a healthy volume in my listening room. Anyone who says that power doesn't matter hasn't listened to much recorded music. Power *does* matter, especially when a multichannel recording gives you a fighting chance to actually recreate the sound of a live orchestra.

The TX-DS555's power output was clean, with no audible distortion at moderate levels. However, when pushed to the wall, the 70-watt-per-channel amplifier section hit it audibly, clipping on loud transients. In a perfect world, I would have preferred at least 100 watts, especially if I was using less efficient speakers. On the other hand, the Onkyo TX-DS555 will let you — and your neighbors — boogie without ear plugs.

I spent some time playing with the ambience-effects settings. The receiver has four ambience modes — Hall, Live, Arena, and Studio — each of which can be individually tweaked for room size, effect level, and reverb time. This helped me dial in reasonably nice effects, somewhat better than I've heard from competing receivers. Folks who lack good room acoustics, or who simply like larger-than-life effects, might enjoy them. Personally, however, I would have gladly traded the effects modes for a few extra watts.

A number of new DVD-Video titles have turned up in my library, so I was anxious to turn my attention to the movie side of the equation. One of the new discs was *Glory* (Columbia Tri-Star), a powerful Civil War story and a powerful movie that, not coincidentally, won the 1989 Academy Award for Best Sound. The entire film is a showcase of



The Onkyo TX-DS555 let all of the Dolby Digital mayhem in the Civil War battle scenes of *Glory* come through.

immersive sound effects, and the TX-DS555 handled them with aplomb. In particular, the battle scenes came off as sonic tours de force, with cannon blasting all around and musket balls whizzing past. All of this Dolby Digital mayhem, dramatically reinforcing the horrors of war, was faithfully conveyed.

The excellent orchestral score, often accompanied by chorus, was well reproduced by the Onkyo receiver. Still, its power limits were sometimes apparent at very loud listening levels. Many people will never listen at such high levels, however, and the receiver's power output should be more than adequate for most apartments and many homes. But if you really want movies to shake your room, you'll need to step up to more power — and probably a higher price tag.

The receiver's Re-EQ circuit rolls off the treble to provide a response that more closely approximates what you might hear in a movie theater. In this case, the rolloff was certainly reasonable and will be appreciated by some listeners. Personally, I don't usually use this feature when it is available, preferring a brighter top end. However, I do sometimes use features like Onkyo's Midnight Theater mode, even though I am separated from my neighbors by thick concrete walls (soundproof walls make good neighbors). This decreases the playback dynamic range of some Dolby Digital-encoded material to provide a more realistic sound when you are listening at low levels (the program must be appropriately encoded to support the feature). The TX-DS555 delivered this effect, too, with precision. Midnight Theater is a very useful feature for apartment dwellers.

The receiver's FM tuner performance

was about par (pretty good on local signals), as was its AM performance (not so pretty). I liked being able to label radiostation frequencies and to group the presets. These features make the tuner really easy to use — and not just for whoever programmed the presets; once that's been done, it's a snap for all users to find what they want.

Like any other budget-price component, the TX-DS555 must make compromises. The question is: are the compromises logical and unintrusive? In this case, I would say yes. I'm not overly concerned with

styling, and I didn't miss a shiny faceplate. On the whole, the feature set is reasonable. Dolby Digital decoding is, of course, a necessity in a home theater today. On the other hand, I could have done without the extra ambience processing, especially if leaving it out had allowed a few more watts or inputs to be designed in. Still, I have no serious complaints. It is easy to design a costis-no-object receiver, but working within a tight budget is extremely difficult. The Onkyo engineers have met their challenge well.

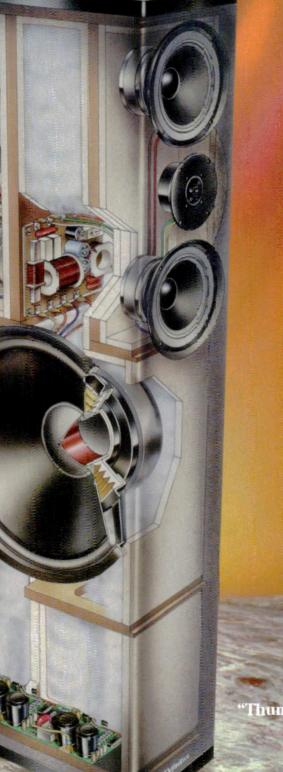
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Reviewers and experts agree that our extraordinary BP2000 Series bipolar powered towers have set the industry reference standard for superior music and home theater performance. Now, Definitive again literally redefines the state-of-the-art with a brilliant new achievement in sonic perfection.

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user's report



Teac H-500 Reference Minicomponent System

TOM NOUSAINE

here once was a time when everything was manual and you actually had to get up out of your chair to change the radio station or to search for a song on a cassette. The advent of the CD player made the remote control a standard feature of audio gear, and today you can do just about anything you could desire without leaving the couch.

Teac's H-500 Reference minicomponent system shows just how far remote control and system programming have come. Practically every function in the system can be accessed through the compact RC-612 remote control. The Reference system I reviewed bundled the 50-watt-per-channel A-H500 stereo integrated amplifier (\$470), the T-H500 AM/FM tuner (\$230), the PD-H570 seven-disc CD changer (\$450), the R-H500 autoreverse cassette deck (\$330), and a pair of LS-H500 two-way bookshelf speakers (\$350) with the remote.

Also available in the H-500 line are a stereo receiver, a Pro Logic surround amp, two different single-disc CD players, and a MiniDisc deck. Teac's mix-

FAST FACTS

POWER RATING 50 W x 2 into 8 ohms with no more than 0.1% THD AMP INPUTS six, including two tape loops and a phono input **DRIVER COMPLEMENT 61/2-inch** woofer, 1-inch dome tweeter HIGHLIGHTS

- 64 tuner station presets
- timer-controlled tuner/auto-record
- seven-disc CD changer
- full-function system remote control DIMENSIONS
- electronics: width, 11¼ inches: height, 4 inches (tuner, cassette deck) or 51/8 inches (amp, CD changer); depth, 12 to 13 inches
- speakers: 15 x 85/8 x 133/4 inches FINISH gold brushed-aluminum faceplates; rosewood vinyl woodgrain PRICE \$1,830 complete

MANUFACTURER Teac, Dept. SR, 7733 Telegraph Rd., Montebello, CA 90640; phone, 323-726-0303; Web, www.teac.com

and-match approach means that you can access the functions of any of the components from the master remote. However, since many of their functions can be accessed only from the remote, the components are of limited value if used outside of a Teac system.

The Reference H-500 system comes with everything you need for installation except, strangely enough, speaker wire. All of the components have matching gold brushed-aluminum faceplates and are 111/4 inches wide. The chassis are just over 11 inches deep except the CD changer's, which is an inch deeper. Stacked, the four components stand about 18 inches tall. Given their comparatively large size for minis, however, you're more likely to want to place them two by two. Setup should take about a half hour for anyone with fewer than ten thumbs.

Since you can plug two of the components into a pair of AC jacks on the amplifier's back panel, you only need a wall outlet with a pair of sockets to power the entire system. The amplifier has two tape loops, a phono input, and inputs for the CD changer, the tuner, and an auxiliary component. The CD changer has two optical digital outputs for connection to an external MiniDisc or CD recorder.

The system's controls are superb in almost every respect. Input switching was instantaneous and silent. The calibrated, motorized, continuously variable volume control moved slowly enough to allow precise level setting. However, full rotation did take about 12 seconds when executed from the remote. I would have liked a mute button for when the phone rings.

You can use the remote to set the record level for cassette taping and search for recorded selections in either direction, but you can't fast forward to a point within a tape selection. For that you have to use the controls on the deck itself. The remote controls every CDchanger function, including programming (up to 32 tracks) and a variety of repeat modes. You can use the remote to scan the tuner presets — up to 32 for each band! - and switch between AM and FM, but it won't let you tune in stations that aren't assigned a preset.

The superb cassette deck played tapes smoothly and silently, and the controls worked cleanly with no surprises. But it did take about 2 minutes to rewind a C-60 cassette.

The CD changer stacks up to seven discs out of sight inside the unit and us-

Definitive's Bipolar Superspeakers Triumph in Triple Speaker-of-the-Year Grand Prix Victory!

"Just like our new flagship BP3000TL, the award-winning BP2000TL, BP2002 and BP2004 all combine our revolutionary bipolar technology with built-in powered subs for extraordinary music and home theater!"

"I would choose these speakers for myself" – Julian Hirsch, Stereo Review

If you're looking for the finest sounding music and home theater speakers available, listen and you'll agree that Definitive's bipolar powered towers are clearly your obvious choice. Our unprecedented triple Grand Prix triumph absolutely confirms what the world's top reviewers all know: Definitive loudspeakers sound the best!

"Bipolar Superspeakers"

- Brent Butterworth, Home Theater Experts agree that bipolar loudspeakers are sonically superior to all others for both music and home theater. In fact, top expert Brent Butterworth wrote, "Bipolar systems are as close as we've come to finding the Holy Grail."

Unlike conventional loudspeakers, all of Definitive's revolutionary bipolars have two sets of precision drivers which radiate sound front and rear in an omnidirectional pattern exactly the way sound is produced naturally.

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"This slammin' system will probably kill any others you've heard" -Brent Butterworth, Home Theater

With their awesome built-in high powered subwoofers, the BP2000TL (\$1499 ea. with 15" sub and 500 watt amp), BP2002 (\$999 ea. with 12" sub and 125 watts) and BP2004 (\$749 ea. with 10" and 125 watts) will all achieve a unique combination of delicate musicality and thunderous power for music and movie perfection in your home.

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- Julian Hirsch, Stereo Review In addition to their totally unsurpassed sonic performance, Definitive's powered towers also deliver absolutely unequalled value. And when you combine them with our perfectly timbrematched center channels and surrounds, you will have a Dolby Digital' and DTS' ready home theater system which, to quote Video Magazine, "will make you literally feel like you're part of the movie." You must experience these Grand Prix Award-winning superspeakers today!



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user's report

HIGH POINTS

Fantastic tuner and cassette sections. Full remote-control functionality. Timer modes for radio and recording.

LOW POINTS

Mediocre speakers. Expensive and large for a minisystem. No mute function.

es the same single-disc loading tray to play a selected disc. As a result, it took about 12 seconds to select another disc. A nifty CD-synch feature lets you start CD playback and begin cassette recording with a single button push. All of the controls worked as smoothly as those on the tuner and cassette deck, but the changer chirped and clicked when playing CDs with surface damage that my other players handle with no trouble.

The tuner's performance was outrageous. This is the best tuner I've ever come across. In my remote reception area, my car radio is the only one that lets me pick up more than one AM station with a standard wire-loop antenna. With a dipole antenna, I can get a dozen FM stations, but most of them won't stay in stereo. The Teac tuner, however, pulled in five AM stations with no noise and others with a listenable signal. It locked in 25 FM stations in stereo and picked up two more with a little noise. This kind of performance is rare indeed at a time when most manufacturers view tuners as little more than an afterthought.

The tuner can automatically scan the frequency band and assign presets to stations in descending order of signal strength. You can store each preset with a display label of up to four letters. A timer is included, so you can set the tuner to turn on when a program is scheduled, and you can set the cassette deck to record it as well. With this system, there is never an excuse for missing NPR's Car Talk. VCR owners have enjoyed time-shifting since Day One, but radio fans have always had to fend for themselves with external timers.

The amplifier's tone controls were able to adjust the sound enough to be useful without overdoing it. A CD Direct switch bypasses the tone controls, but as far as I could tell they are already out of the circuit path when they're set at their center detents.

The amp's frequency response was flat over the entire audio band, but the CD changer was 1 dB down at 16 Hz and 0.5 dB up at 20 kHz. No big deal. The little amp put out an impressive 80 watts at 1 kHz at the onset of clipping into 8 ohms, or 90 watts into 4 ohms. That's more than the specified 50 watts and plenty of juice to drive the LS-H500 speakers - or most others, for that matter.

The sound of any system is limited by its speakers, and this Teac system is no exception. The speakers' tonal balance was reasonably good, but vocals had some coloration and a little extra sibilance. The sound was clear and reasonably detailed at moderate volume levels. When I placed the speakers on 27-inch stands, the imaging for a centered listener was quite good, with a reasonable sense of depth. The soundstage extended out to the edges of the speakers while maintaining a stable center. The speakers were limited dynamically. There was audible distortion at high volume levels, with extra spittle and hardness on female vocals. Demanding material, such as the bowed bass on Oscar Peterson's "You Look Good to Me" from We Get Requests (Verve), had a tearing quality when I cranked up the volume. In a small room, however, the output was adequate.

The speaker's on-axis response measured a little on the rough side (± 5.7) dB from 51 Hz to 17 kHz) but was about average for a bookshelf model with a 1-inch tweeter and a $6^{1/2}$ -inch woofer. A small bump between 70 and 90 Hz made it seem like the speakers had more bass than they really did. On the treble side, there was a sharp peak at 14 kHz and a good deal of roughness above 1 kHz. The response was somewhat smoother 30 degrees off-axis. The speaker cabinets are nicely finished, but the grilles are shaped like horse collars. This unfortunate design choice is especially disappointing considering how handsome the electronic components are.

The Teac H-500 Reference minicomponent system has all of the features a two-channel listener could ask for. Sparkling with convenience and usability, it includes functions that are uncommon in stand-alone components, let alone a minisystem. For \$1,830 you get one hell of a tuner along with the rest of a stereo system. The amp delivers more power than you have a right to expect from a minisystem, and the carefully thought-out remote makes operation a breeze. Not too shabby - but I'd still want better speakers.

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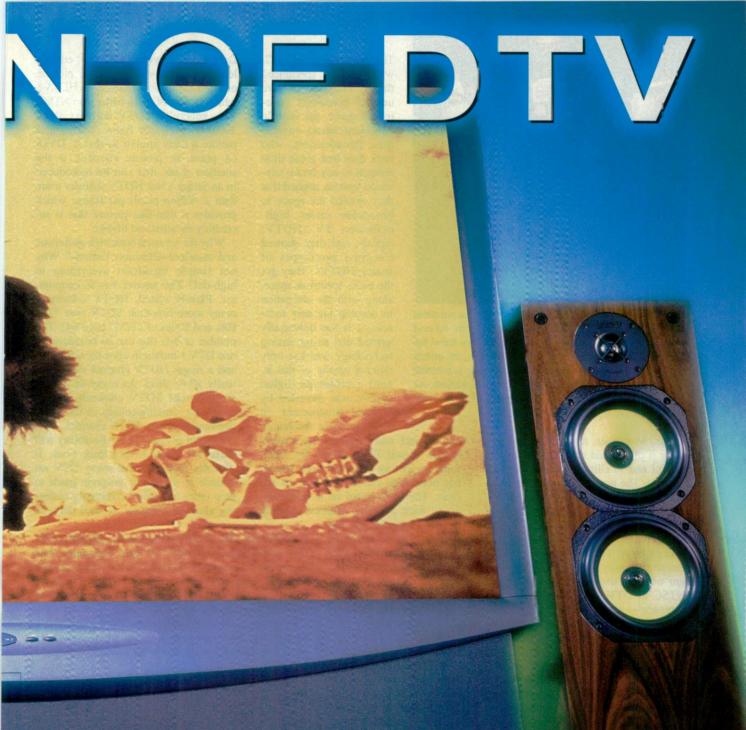
The journey to DTV has come to an end, but the odyssey has just begun

by Ken C. Pohlmann

TELEVISION AS WE KNOW IT IS OVER. Full the plug and rol your set into the guest bedroom. It's about to join horse-crawn carriages, buggy whips, steam loconotives CB radios, record players, and other technologies that were once all the rage but now live only in museums, notalgic theme parks, or landfills. Get used to the icea, and make room for something new and improved — something cigital.

Because so much of our electronic world has gone digital, it should come as no surprise that the next generation of TV will be digital, too. Digital TV (DTV) made its official American debut in November Compared with our familiar TV system, DTV can deliver pictures like you've never seen on a TV before, in a widescreer format, with a quality and vibrancy approaching that of 35mm film — and with the 5.1-channel Dolby Digital surround sound you've grown to love on DVDs.

It took about a decade of work and diplcmacy, but the



many interested parties were able to reach agreement on the DTV specification, and big beautiful sets are now meaching retailer's shelves. But is DTV for you? Well, as good as it is, there are still some reasons you might want to wait to take the plungs First, DTV sets cost about the same as a subcompact car. Second, you can't get DTV over cable — at least not yet. And, of course, there's not much compelling DTV programming being broadcast — even if you're lacky enough to live in one of the major metropolitan areas where DTV broadcasts have begin (see "What's On Tonight?" or page 67). But once you see a high-definition digital broadcast on a new big-screen TV, you might find thard to resist upgrading.

Why a New TV System?

Some would argue that there's nothing really wrong with our current TV system. In fact, considering that it was criginally

designed for screens measuring only 5 to 10 inches across, it's fairly amazing that it's lasted as long as it has, gracefully accepting an upgrade to color in the 1950s and the inclusion of stereo and surround sound in the 1980s. But, alas, like almost everything else conceived in the 1920s (TV made its cebut at the 1929 World's Fair), the analog NTSC television s andard is showing its age.

The reason we're getting DTV is that the U.S. government and various corporate powers have come up with a plan to phase out analog TV and switch to a digital system. TV is a big business (we spand \$9 billion annually on new sets and \$30 billion on programming subscriptions), and the desire for a better system, and even bigger profits, has prompted energetic engineers to design a TV system for the world of tomorrow.

The question is: how quickly will the future arrive? Relatively few broadcasters are actually transmitting DTV pro-



MITSUBISHI: Mitsubishi has seven HDTV-compatible sets in its HD-1080 line, with screens in both 4:3 and 16:9 aspect ratios. The 4:3 sets range in size from the 50-inch VS-50803 (\$4,299) to the 80-inch VS-80803 (\$9,999). The two 16:9 sets are the 65-inch WS-65903 (\$6,499) and the 73-inch WS-73903 (shown, \$9,999). All of the sets are designed to be connected to the HD-1080 HDTV set-top converter box (\$3,499).

grams. Moreover, television programming is distributed via a mosaic of terrestrial and satellite broadcasts as well as cable. The timetables and agendas of these three groups of program distributors in DTV's rollout are not entirely clear. You won't, for example, be able to receive DTV over cable for another year or more. Off-air reception will be the primary way to receive DTV to begin with. In short, the transition from NTSC to DTV will be expensive and complex — and it will take longer than you might expect.

Unlike many new technologies that are introduced and roll the dice in the marketplace, DTV is virtually guaranteed to succeed. That's because the importance of television in our society has prompted the government to mandate a transition to the new technology. According to the official timetable, which will most likely be extended more than a few times (the FCC is scheduled to revisit the issue every two years), the current NTSC system will go off the air in 2006, and a chunk of the spectrum now used to broadcast its analog signals will be returned to the government for auction. Until then, broadcasters must continue to provide analog programming even as they phase in digital TV. We don't know the exact date when NTSC broadcasting will terminate, but sooner or later it *will* terminate. DTV is the future of television in America.

The path to DTV was labyrinthine.

62 STEREO REVIEW DECEMBER 1998

The story began in 1987, when the FCC announced that it intended to give unused broadcast spectrum space to mobile communications companies. Broadcasters, who back then had given little thought to any future television system, argued that they needed the space to broadcast future highdefinition TV (HDTV) signals, and they showed Congress prototypes of analog HDTVs. They got the extra spectrum space, along with the obligation to develop the new technology. It was universally agreed that using analog technology was the only rational course - that is, until a prototype digital system was unveiled by General Instrument in 1990. It was a revelation,

and the race was on to develop a wholly new digital TV standard. By 1992, four competing systems were tested, but none was clearly superior to the other. The FCC called on the developers to form a Grand Alliance, pooling

the best aspects of the four systems. In 1995, the Advanced Television Systems Committee (ATSC) approved a new standard, and in December 1996 the FCC gave its blessing. DTV was born.

DTV Definitions

The DTV standard defines the transmission and reception of digital television, but it does not describe a single format. The long struggle to develop the technology, the different and sometimes conflicting interests of the TV and computer industries, the desire for a highly flexible new system, and the inherent complexity of the technology itself all led to an umbrella DTV standard allowing for varying levels of picture resolution, from excellent to spectacular. For starters, DTV can be implemented as StandardDefinition Television (SDTV), equivalent to a studio-quality NTSC picture, or High-Definition Television (HDTV), which is dramatically better than NTSC. Very generally, SDTV delivers about 300,000 pixels per frame, providing a picture quality similar to that of DVD. (A pixel, or picture element, is the smallest detail that can be reproduced in an image.) But HDTV delivers more than 2 *million* pixels per frame, which provides a film-like picture that is incredibly detailed and lifelike.

Why do we need both high-definition and standard-definition formats? Why not simply broadcast everything in high-def? The answer lies in economics. Plainly stated, HDTV consumes many more bits than SDTV (see "The Bits and Bytes of DTV," page 64). The number of bits that can be broadcast in one DTV bandwidth allocation is finite, and a single HDTV channel needs virtually all of them. As many as four to six different SDTV channels can be broadcast simultaneously in the same bandwidth as one HDTV channel.

If nothing else, DTV's flexibility will make *TV Guide* a very thick book. It virtually mandates that every DTV set include an electronic program guide to help users navigate a constantly changing maze of channels. A local network

PANASONIC: The PT-56WXF90 (shown, \$6,000), a 56inch widescreen projection TV from Panasonic, has reportedly been selling well since it hit stores in late summer. It doesn't really come into its own until it's connected to the TU-DST50 set-top DTV converter box (\$1,700). Two 4:3 direct-view DTV sets, including a 36inch model capable of displaying a 1080i signal and a 32-inch set that converts high-definition signals to 480p, can also accept the converter's output.



affiliate, for example, might broadcast several SDTV channels during the day, then switch to one HDTV channel during prime time. Another station might broadcast HDTV all the time — or never at all. The FCC requires only that a broadcaster provide one free DTV channel. Thus, some stations will choose to broadcast multiple SDTV ture has 1080 x 1920 pixels, while the lowest SDTV resolution is 480 x 640. With almost seven times the pixels, you can just imagine how much better a high-definition picture can look. The picture can also assume either a conventional 4:3 aspect ratio like your current TV or a widescreen 16:9 ratio.

The formats are also differentiated by



SHARP: Sharp's TU-DTV1000 DTV set-top decoder (shown, \$1,999) will output 1080i, 480p, and 480i component video. Sharp is also introducing a CRT-based rear-projection set, the 64LHP5000 (\$9,999). An HDTV tuner/decoder is built in, as are dual NTSC tuners. The set and decoder are equipped with a digital expansion port, which is intended to allow consumers to upgrade the set for future applications and cable compatibility.

channels, providing one free and charging extra for the others. Because a single HDTV channel consumes a station's entire bandwidth, a free one would have to subsist on advertising revenue alone. That could prove an economic disincentive for broadcasting HDTV unless advertisers embrace high-definition commercials. In practice, we will see both SDTV and HDTV pictures.

On the bright side, even SDTV will represent an improvement over NTSC television. The DVD-like picture can be in widescreen with 5.1-channel surround sound. Moreover, because it is transmitted digitally, the signal should be more reliable than our current TV, with more resistance to multipath distortion and noise. The picture quality should also be consistent over the broadcast coverage area; consumers in fringe areas may enjoy flawless reception. On the downside, because of the nature of digital signals there will be no gracefully degrading reception outside the coverage area. You'll probably either receive a great-looking over-the-air signal or nothing at all. Of course, very few people have experience receiving actual, over-the-air DTV signals, so what your actual reception experience will be like is still open to question.

The highest-resolution HDTV pic-

the way the screen is "painted." Conventional TV displays use *interlaced* scanning, in which an electron beam scans all of the odd-numbered picture lines from top to bottom, and then goes back and fills in the even-numbered lines between them. Interlaced scanning was originally necessary to eliminate flicker; it prevented the top of the picture from starting to fade before the

electron beam got to the bottom of the screen. However, today's computer displays use *progressive* scanning, in which all lines are displayed in sequence. Faster scan rates and improved screen phosphors make progressive scanning practical.

The question of whether DTV should use interlaced or progressive scanning led to intense debate between the traditional broadcast industry (which favored interlaced scanning) and the computer industry (which favored progressive scanning). Each felt that using the technology it was already familiar with would lead to a competitive advantage. In the end, the FCC included both scanning formats in the DTV standard.

In all, the format family is, frankly, confusing. But you'll hear such terms as 1080i (1080 lines, interlaced), 720p (progressive), and 480p being bandied about. The highest-quality picture will be provided by the 1080p format, but first-generation DTV receivers won't achieve that resolution, though some extremely expensive video data projectors can.

No matter what the picture resolution, DTV audio can always *sound* great. All of the formats can employ Dolby Digital sound, the same as used in DVD-Video. Few, if any, programs will be broadcast in 5.1-channel surround sound at first, however — the broadcasting infrastructure for manipulating 6 channels of audio doesn't exist. But down the road, you'll be able to enjoy 5.1-channel playback of movies and other programs using the same Dolby Digital-equipped A/V receiver already installed in your home theater.

Transition Hurdles

Without question, DTV offers extremely high-quality audio and video performance, but the transition will not be quick or easy. First, using new broadeast spectrum space allocated by the FCC, broadcasters must begin to transmit DTV programming while continuing to broadcast analog NTSC programs. By the end of this year, about 30 percent of the U.S. population should



RCA/PROSCAN: Themson won't launch any DTV sets under its RCA and ProScan brands until early spring next year. Planned, however, are a 55-inch 16:9 rearprojection RCA set, the P55000 (shown, \$6,999), and a 61-inch ProScan 16:9 set, the PS61000 (\$7,999). Both have built-in HDTV reception capability. Also due next year is a \$699 set-top box for receiving DTV and DSS broadcasts on an analog TV.

THE BITS AND BYTES OF DTV

S ANY ANGLER KNOWS, the art of fishing comes alive as you try to reel in a 300-pound marlin on a 100-pound-test line. A similar challenge confronted electrical engineers when they set about to design the DTV system. The frequency spectrum provided by the FCC called for a series of channels in the existing VHF/UHF spectrum, each with a bandwidth of 6 MHz. Using signal-modulation techniques, this meant that each channel could accommodate 19 million bits per second (Mbps) of digital audio/video data. That's a lot of bits (the CD, for example, delivers 1.4 Mbps), but not nearly enough for high-resolution pictures, which might require as much as 1.5 billion bits per second (1,500 Mbps). Only efficient data-compression techniques could enable the massive amounts of data needed for HDTV to be placed within the allowed spectrum.

The DTV designers cast about for the best data-compression methods and decided on two that have since proved themselves in a variety of applications. Specifically, they selected MPEG-2 compression for video and Dolby Digital compression for audio. MPEG-2 is used in DVD-Video and digital satellite delivery (at a relatively low bit rate). An MPEG-2 encoder analyzes frames of video and discards redundancies and less visible detail, coding only the most vital information that the eye will see. This data is placed into digital files that convey the series of video frames. Dolby Digital is used to code the soundtracks on DVD-Video discs. The audio signal is analyzed to find content that would be inaudible if reproduced, and that part of the information is either discarded or coded with fewer bits, but in such a way that any inaccuracies are not perceived. Dolby Digital relies on psychoacoustics to model the strengths and weaknesses of human hearing. Together, MPEG-2 and Dolby Digital squeeze the bits of DTV into the relatively small pipeline the FCC has allocated.

While MPEG-2 and Dolby Digital form the basis for DTV, they are only two algorithms within a much larger system. The DTV standard also defines the way in which the bits are formatted and how the digital signal is to be broadcast or conveyed over cable. Moreover, the standard specifically defines 18 display formats. Fortunately, the DTV receiver — and not the user — has the job of identifying the format used, decoding the compressed signal, and converting that data into brilliant high-resolution pictures and sound. But only a carefully engineered display can provide the full picture quality represented by the decoded signal.

DTV is a complex technology, and at least for the first few years, that complexity will mean high prices. Still, by choosing the MPEG-2 and Dolby Digital standards to achieve the needed data compression, DTV's designers avoided even higher costs while preserving high quality for home viewers. $-\kappa P$.

be able to receive at least two stations transmitting digital TV. According to the FCC, all major network affiliates in the ten largest markets must have a digital signal on the air by May 1 of next year, while those in the next twenty largest markets must be up and running digitally by November 1, 1999. Commercial stations in all remaining markets have been given a deadline of May 1, 2002, while public-TV stations have an extra year to meet the transition deadline.

The government predicts that by 2006, 85 percent of American homes will be watching DTV programs, either on DTV receivers or on NTSC sets with converter boxes, and tentative plans are to begin phasing out NTSC broadcasts on January 1 of that year. Most industry experts say that this timetable is unrealistic, that the actual installed base of DTV-capable sets will be much lower, and that the deadline will be greatly extended. They point out that it took more than ten years for color TVs to find their way into half of U.S. homes, though they usually forget to point out that color TV was launched by a single network (NBC) and a single set manufacturer (RCA).

Of course, while it's easy for the FCC to predict a rosy future, it's somewhat more difficult and expensive for broadcasters to implement it. The four major commercial broadcast networks (ABC, CBS, NBC, and Fox) have greeted DTV with reactions ranging from elation to skepticism. CBS and



ZENITH: Already on the market is Zenith's Pro900X front projector (\$12,600). Combined with the new IQADTV1W set-top converter (not shown, \$5,995), the Pro900X becomes a full HDTV package that can deliver high-definition images on screens up to 200 inches (diagonal). Also planned for next year is a 64-inch rear-projection TV with built-in HDTV decoder. It is expected to sell for more than \$10,000.

NBC have embraced DTV. NBC has selected 1080i as its HDTV format and 480p as its SDTV format. The network will show movies like *Titanic* and programs like *The Tonight Show* in HDTV, but sports and other programming are initially slotted for SDTV. Like NBC, CBS selected the 1080i format for its HDTV programming, but 480i for SDTV. CBS has also committed to broadcasting some live sports programming — including some NFL and NCAA games — in high-definition.

> ABC has taken another route, selecting 720p for HDTV and 480p for SDTV. ABC feels that 720p will be visually superior to 1080i and that the progressive-scanning mode will ultimately overtake interlaced displays as the technology of the future because it handles motion better and requires a lower bit rate. Fox has approached DTV with caution, tentatively announcing some broadcasts in the 720p and 480p formats. PBS has been a strong advocate of DTV, announcing plans to broadcast



SONY: Unlike the other manufacturers who are offering rear-projection sets, Sony is introducing a direct-view widescreen set, the KW-34HD1 (\$8,999). It has a 34-inch flat FD Trinitron Wega picture tube and a DTV tuner built into the matching stand (included). Sony also plans to introduce its DTR-HD1 set-top receiver/decoder, which can output 1080i, 480p, or 480i signals for projection displays or an NTSC signal for traditional analog sets.

full HDTV programs in prime time and to multicast SDTV programming during other hours. But since PBS mainly broadcasts programming created by its independent member stations, it hasn't stated any DTV-format preference.

The Local Link

At the highest levels of the network broadcast industry, transition plans are well underway. However, the local affiliate stations are the all-important link between the networks and consumers. There are more than 1,500 different affiliates, with perhaps more than 1,500 different attitudes toward DTV. It will be expensive for a local affiliate to buy the equipment needed to pass the DTV signal from the network through to its viewers, and it will be even more expensive (perhaps \$8 million) for a local affiliate to purchase the equipment to originate its own HDTV programs.

Clearly, the stations in large urban markets will have more resources to draw on (and perhaps greater competition), while stations in smaller markets may take a more leisurely approach. It's even possible that many local affiliates might economically downconvert an HDTV feed from the network and rebroadcast it as SDTV. In smaller markets with fewer stations, it's even conceivable that a single station could broadcast TV shows from more than one network.

The Cable Conundrum

Broadcast networks once owned the television market, but today millions of people use other programming sources as well and view all of them through delivery systems other than over-the-air broadcast. For example, about two-thirds of American homes are wired for cable television. But none of them will see DTV over cable yet. The first-generation DTV sets now being introduced will not be cable-compatible because they were designed and manufactured before there was a standard for connecting a digital cable box to a TV set or converter box. To provide an upgrade path, many DTV

sets are sold as separate displays with external receiver/decoders.

Presumably, all second-generation DTV sets will be cable-compatible. But that doesn't mean that all cable systems will be DTV-compatible! Many cable systems don't have the

capacity to include the extra DTV channels — at least not without removing some popular and profitable channels from their lineup. So the cable industry has been, at least initially, reluctant to embrace DTV. But as the installed base of receivers grows (and it inevitably will), cable companies will make the move - indeed, they might be required to — and will install the necessary infrastructure and supply DTV-ready cable boxes to their customers. In fact, if cable companies don't embrace DTV quickly enough, we may see a resurgence of the same kind of rooftop antennas that cable TV eliminated in many areas.

Direct broadcast satellite companies such as DirecTV, USSB, and EchoStar clearly understand the lure of high technology; after all, they've been broadcasting digitally for years. All three have announced plans to begin beaming some HDTV programs to their customers. (A newcomer, Unity Motion, has announced plans to satellite-broadcast *only* HDTV signals.) Finally, premium cable channels such as HBO will begin to provide high-definition programming as well.

When will you see genuine HDTV in your city, and for how many hours a week? Good questions. Even though some stations have been broadcasting test signals for more than a year, the transition will be slow and gradual as programmers determine what they think viewers want to see.

Of course, if consumers want to speed the transition to DTV, the best thing they can do is buy DTV sets. As noted earlier, the receivers (built into some sets, available as separate components for others) are designed to decode all of the DTV formats. Thus, whether it is a 1080i or 720p transmission, the receiver can crunch the numbers and create the appropriate display. Such receivers are eligible to be identified as ATSC-certified and display a stylized DTV logo. However, while a given model will receive HDTV signals, it may not necessarily *display* an HDTV picture; instead, it may downconvert

SAMSUNG: Samsung's first HDTV set is the 55-inch rear-projection SVP-555JHD (\$6,999). It has an integrated DTV decoder and can display all received signals in the 1080i format, including standard NTSC programs.



the signal to a lower-quality SDTV picture. If you want to see HDTV, make sure the set you buy can display it.

True *HDTV* sets can display the HDTV 1080 and 720 formats in a 16:9 aspect ratio. Other sets may be DTVs, but they are not genuinely high-definition TVs. Finally, don't forget that most DTV receivers will also receive analog NTSC signals, so you can replace your existing TV during the transition period without any danger of missing analog-only programs.

DTV Hardware Options

Although most people own direct-view TVs, this design is not particularly suitable for DTV. A small screen cannot show off the benefits of a high-definition picture fully, and a direct-view widescreen set with a tube that *can*



PIONEER: Pioneer's cutting-edge, 50-inch, widescreen plasma display is sure to attract a lot of attention, but at \$25,000 it probably won't find its way into many home theaters. For those on a tighter budget, the Pro-700HD DTV-ready widescreen set (\$7,500) is designed to accept a plug-in DTV tuner/decoder, the SH-D07 (\$2,500).

show the full resolution of HDTV would be not only expensive but bulky. Therefore, most DTV receivers will use a rear-projection design, which can provide a large screen (55 inches and up) and give a bright picture. In fact, several rear-projection models are already available from several manufacturers. Most of these first-generation DTV projection sets require a separate receiver/decoder box. The big advantage here is that adding cable compatibility becomes a matter of upgrading just the receiver/decoder, not the TV set itself.

Alternatively, some DTV sets will use a front-projection system. Although more expensive, these models can provide even larger screen sizes, which many enthusiasts find necessary for a truly cinematic experience. Another alternative, still in the future, is a flatpanel plasma display. Although this technology is already hitting the market, so far it's a moneyis-no-object proposition.

There's no question that first-generation, rear-projection DTV receivers are expensive, starting around \$7,000. But consider that first-generation color-TV sets cost about \$1,000. If you factor in inflation, that is almost the same cost as today's DTVs. Still, everyone knows that subsequent generations of DTVs will be more affordable. But when will they cost the same as big-screen analog TVs today? Frankly, it won't be anytime soon. The high cost of a DTV set is not because of the silicon chips, which typically

see dramatic drops in price over time, but because of the display itself. High-resolution displays have historically been expensive simply because they are so tricky to manufacture.

Some viewers will choose to watch DTV without buying a DTV set. Instead, they'll use an existing display and buy a set-top converter box. Starting at about \$700, converter boxes will contain all of the circuitry needed to receive a DTV signal and then convert it to an NTSC signal for viewing on a conventional analog television. But since the picture

on a conventional TV can't be high-definition, there probably would not be a compelling reason to buy a converter to watch DTV without some irresistible programming that wasn't available elsewhere - or unless NTSC broadcasting came to an end. But is analog TV a dead end? Yes, it is, though analog TVs will still have a long, useful life even after NTSC signals are no longer broadcast: they'll still be used to watch videotapes. DVDs, video games, and other NTSC sources.

The Long and Winding Road

It's been a long road to the dawn of DTV, filled with many twists and turns. As recently as



TOSHIBA: Three of Toshiba's five planned HDTVready sets have already been rolled out. The 71inch TP71H95 (\$7,300), the 61-inch TP61H95 (\$4,100), and the 65-inch widescreen TW65H80 (shown, \$7,300) can all display 1080i images, and they can also accept 480p signals from Toshiba's DVD players with 480p outputs. Two other widescreen rear-projection DTV-ready sets are due next year: the 56-inch DW56J80 (\$6,999) and the 65-inch DW65J80r (\$8,999).

> a few years ago, an exasperated network executive proclaimed, "We'll have digital TV just as soon as we have an anti-gravity machine." We're still waiting for an anti-gravity device, but until then, we are privileged to witness the launch of an amazing new television technology. It will provide unprecedented quality and move us firmly along the path to convergence. Just as color TV provided such a clear improvement over black-and-white that it made it obsolete, DTV will surpass analog TV and move it into history.

PHILIPS: A 64-inch rear-projection set with built-in HDTV tuner/decoder and Dolby Digital decoder, the 64DPP9901 (about \$9,000) is the first DTV entry from Philips. The company also intends to deliver set-top converter boxes next year to allow conventional sets to display digital programs.



o you think digital TV (DTV) is just another piece of corporate/media hype? It's time to get with the program. The change from analog to digital TV has begun. All of the major broadcast networks are now providing some high-definition digital programming, and digital stations are on the air in many U.S. cities. Viewers are discovering that DTV delivers widescreen images with a filmlike clarity and digital sound.

Broadcasters originally agreed with the FCC to have at least one digital station in each of the top ten markets by November 1998, but the transition to digital could happen much more quick-

PROGRAM GUIDE

Hit movies and

NFL games in

High-definition

ly than that. If the networks stick to the plans they discussed with us, digital stations will be on the air in 25 cities by the end of this year. Many of these cities will be entering the DTV era well ahead of the FCC mandate. (See "The Dawn of DTV" on page 60.)

Oddly enough, some of the smaller markets may initially have more digital TV stations than many of the major urban areas. As this article went to press in mid October, none of the networks had plans to start digital broadcasts in Chicago in 1998. Only CBS was ready to deliver digital programming in New York. Meanwhile, Philadelphia, Seattle, and Washington each had four digital stations; Atlanta, Dallas, Detroit, and San Francisco each had three: and Portland (OR), Cincinnati, and Indianapolis - the 27th, 28th, and 29th largest markets, respectively each had two. Columbus (OH), Harrisburg (PA), Kansas City (MO), Madison (WI), Manchester (NH), and Milwaukee, which aren't even among the top 30 markets, also had digital stations.

But having digital broadcast facilities is not the same as being ready and able to make use of them. Some upgraded facilities won't actually broadcast DTV programs — let alone surround sound — until sometime in 1999. First they have to get their gear, procedures, and staffers up to speed.

> The biggest road block is the availability of sites for new broadcast towers, which are scarcest in the crowded urban areas. "It's very difficult to come by tower sites in modern life," explained Andrew Setos, executive vice-president, News Technology Group, Fox Broadcasting. "And this is allnew technology. You can't replace a TV infrastructure whose net worth is in the range of \$10 billion overnight." At first, digi-

Zenith's flagship IQA64W10W 64-inch rear-projection DTV

The major networks reveal their DTV plans for the coming year. by GORDON BROCKHOUSE

tal stations will

air mostly programming made for existing NTSC television. Some networks will upconvert this programming to high-definition (HDTV); others will show it in standard-definition (SDTV), which delivers crisper pictures than conventional TV. The major networks will broadcast only a few hours of real HDTV programming each week.

The broadcast networks are well ahead of the cable networks when it comes to digital TV. At press time, HBO and Discovery were the only cable networks to have announced plans for HDTV programming. As we went to press, however, equipment manufacturers and the cable industry had yet to reach agreement on an interface between DTV-capable set-top boxes and digital TV sets. Cable-compatible DTV sets are unlikely to hit the market before this time next year.

Following is a rundown of the digital programming each service plans to offer over the next few months and what stations you can expect to see come on line — all accurate as of press time. Some of these plans could change by the time you read this.

NBC Four stations owned and operated by NBC were slated to offer digital programming on November 1: WCAU in Philadelphia, WRC in Washington, KXAS in Dallas–Fort Worth, and KNBC in Los Angeles. Seven NBC affiliates were also scheduled to begin digital broadcasts: WHDH in Boston, WXIA in Atlanta, WLWT in Cincinnati, WTHR in Indianapolis, WNDU in South Bend (IN), KING in Seattle, and KRON in San Francisco.

At press time, NBC had not announced its initial programming plans. It is building a new HDTV facility for *The Tonight Show with Jay Leno* and will begin broadcasting the show in the 1080i format sometime in the first half of 1999.



NBC plans to show the movie *Men in Black* in 2000 and *Titanic* in 2001, both in 1080i. NBC's digital stations will upconvert the analog network feed to 1080i during those times when native HDTV material is not being broadcast.

ABC Three ABC owned-and-operated stations were to begin digital broadcasts in November — WPVI in Philadelphia, KGO in San Francisco, and KABC in Los Angeles — as well as 11 ABC affiliates: WMUR in Manchester (NH), WCCB in Boston, WTNH in New Haven (CT), WJLA in Washington, WSB in Atlanta, WXYZ in



Detroit, WKOW in Madison (WI), WFAA in Dallas, KOMO in Seattle, KATV in Portland (OR), and KITV in Honolulu. The Washington affiliate will initially broadcast only in standard-definition.

While ABC hadn't made specific programming announcements, its president of operations and engineering, Preston Davis, told us that ABC will have up to 4 hours a week of HDTV programming, initially consisting of theatrical movies in the 720p format with a widescreen (16:9) aspect

ratio. If there is significant demand for HDTV programming, ABC could "move quickly to offer sitcoms and dramas in high-definition," Davis said. "A fair number of our prime-time programs are on film. We can extract either 16:9 or 4:3 [pic-tures] from them, though most producers today frame in 4:3."

Davis said that "most of the ABC stations revert to 480 lines" when they're not receiving a high-definition feed from the network. "Our hope and recommendation is that they'll use progressive scanning," he explained, "but we don't control this."

CBS The four owned-and-operated CBS stations — WCBS in New York, KYW in Philadelphia, KPIX in San Francisco, and KCBS in Los Angeles — were to begin broadcasting digital signals in November. The network also expected seven of its affiliates to deliver some digital programming then as well: WUSA in Washington, WRAL in Raleigh (NC), WBTV in Charlotte (NC), WGNX in Atlanta, WBNS in Columbus (OH), WKRC in Cincinnati, and KHOU in Hous-



ton. Three more CBS affiliates were scheduled to begin digital broadcasting before the end of 1998 or in early 1999: WWJ in Detroit, WISH in Indianapolis, and KIRO in Seattle.

CBS plans to have an average of 5 hours of HDTV programming a week, using the 1080i format. Its first HDTV telecast was scheduled to be the November 8 game between the New York Jets and Buffalo Bills. Three more HDTV telecasts of NFL games are scheduled for December 19 and 26, and January 9 or 10.

Bob Ross, CBS's East Coast VP, operations and engineering, told us that the network will introduce more HDTV programming "as demand warrants." CBS plans to eventually broadcast HDTV full-time. "A good portion of our prime-time programming is shot on 35mm film in 16:9. And the Hollywood community has more capacity for high-definition transfer than was previously thought."

CBS digital stations will upconvert the network's analog feed to the 1080i HDTV format when digital programming is not available. "What you'll have is studioquality NTSC [standard TV] delivered to the home," Ross commented. CBS wants to supply its network with a full-time digital feed, however, and is implementing equipment for digitizing and upconverting analog signals to 1080i. Ross said these plans suffered a setback when the Galaxy 4 satellite, which CBS was planning to use for the feed, failed earlier this year. **PBS** The Public Broadcasting Service planned to celebrate "Digital Week" from November 9 to 12, launching its digital programming with great fanfare. Six member stations were set to broadcast digital signals: WETA in Washington, WITF in Harrisburg (PA), WMVS in Milwaukee, KCPT in Kansas City (MO), KCTS in Seattle, and OBP in Portland (OR).

PBS's first HDTV broadcast, *Chihuly Over Venice*, was scheduled for November 9. (The 90-minute program shows how glassblower Dale Chihuly created monumental glass chandeliers to be installed over the canals of Venice.) Immediately following was to be a half-hour DTV primer in the 1080i format.

Another Digital Week program, a Ken Burns documentary on the architect Frank Lloyd Wright, uses technology developed by Intel to provide extra multimedia content that can be viewed on a PC attached to the DTV set's data port. PBS chief technology officer, VP John Tollefson, expects future digital TVs to have built-in capability to recover such extra material. He believes that simulcasting extra data is a valuable feature, particularly for educational networks. "PBS feels strongly that we can enhance the viewing experience if we send data that lets the viewer learn more," he said. "Especially with our documentaries and history programs, so much material is left on the cutting-room floor."

Following Digital Week, PBS plans call for airing at least one HDTV program in prime time each month. These include Jessye Norman — Home for the Holidays (December 21), The Kennedy Center Presents a Tribute to Muddy Waters, King of the Blues (January 27), National Desk (January 15, 22, and 29), Washington the Beautiful (February), Over Ireland (tentatively scheduled for March), National Desk (April), Fiesta in the Sky (April), and Great Performances: A Tribute to Duke Ellington (May).

All of the planned HDTV programming will be shown in 1080i. But Tollefson said that PBS member stations are free to produce programming in 720p, show it themselves, and make it available to other PBS stations. In the time slots when high-definition programming isn't shown, PBS digital stations will broadcast in 480i.

PBS stations scheduled to deliver digital programming next year include WGBH in Boston, WNET in New York, WHYY in Philadelphia, WMBP in Baltimore, WPBA in Atlanta, WFYI in Indianapolis, WMPN in Jackson (MS), KTCA in Minneapolis, KUHT in Houston, KMBE in Bismarck (ND), KRMA in Denver, KAET in Phoenix, KCET in Hollywood, and KLCS in Los Angeles.

HBO and Time Warner

HBO plans to make high-definition versions of its East and West Coast feeds available to cable- and satellite-TV affiliates. Theatrical and HBO-produced movies, which comprise 70 percent of the cable network's programming, will be shown in the 1080i format. Altogether, there will be about 16 hours a day of HDTV programming. Affiliates will not pay extra for the high-definition feed as long as they don't charge subscribers extra.

Time Warner Cable, one of the two largest cable companies in the U.S., plans to deliver digital cable TV (which is not the same thing as DTV over cable), including high-definition signals, to subscribers who buy digital sets and request the service. "We're finalizing the technological means that we'll use to accomplish that," said Mike Luftman, VP of corporate communications. With respect to HBO's high-definition channels, Luftman said, "We'll make these available to HBO subscribers in systems that have been upgraded." Time Warner's Pegasus digital television service is currently under trial in Austin (TX).

"We're committed to carrying digital TV signals from broadcast networks and major independents," Luftman commented, "but not local shopping channels or religious channels that happen to purchase HDTV equipment. We're committed to providing a high-quality signal from services whose content our customers want to see."

TCI, which is neck and neck with Time Warner Cable in numbers of subscribers, did not respond to our requests for an interview. **Discovery Networks** Discovery Networks provides a digital feed to its seven specialty cable channels (the Science, Civilization, Home & Leisure, Kids, Wings, and Health channels, and Discover *en español*). Charles Humbard, Discovery's VP and general manager of Showcase Networks and advanced tele-

vision, said that digital delivery is becoming more popular with cable networks because it uses limited satellite-transponder space more efficiently.

Once digital-TV cable boxes become available, Discovery's standard-definition digital signals (and the digital signals of other cable networks with similar methods of delivery) could be delivered in native 480i format. Discovery plans limited HDTV programming in 1999. Humbard told us



he's "a format agnostic. We could output to cable companies in 720p or 1080i."

The network plans to deliver a total of 30 to 80 hours of HDTV programming next year, Humbard said. "There are no plans to do a complete high-definition channel in 1999. You'll see Discovery programs at electronics outlets as demonstration material for HDTV." The company might also offer high-definition content with a cable- or satellite-TV company on a co-branded basis, Humbard added. "We've had discussions with DirecTV, but nothing's final."

EchoStar — **The Dish Network** EchoStar plans to add HDTV to its digital satellite service starting around March 1999. "We have a lot of extra satellite capacity, so we plan to launch high-definition content as soon as we can get it," commented Mark Jackson, EchoStar's senior VP of satellite services. Programming will include HBO and the broadcast networks, along with some pay-per-view content. The company plans to offer a high-definition satellite receiver that can also receive terrestrial DTV broadcasts. "Unlike satellite systems that will require a second dish for HDTV, EchoStar will offer the HDTV format so that it can be received on the existing 18-inch dish," Jackson said, "by transmitting a single HDTV feed at bit rates that allow for up to 1,080 lines of resolution."

DirecTV and USSB RCA has announced that it will market two high-def-

inition projection televisions with built-in high-definition Digital Satellite System (DSS) receivers, a 55-inch set for \$6,999 and a 61-incher for \$7,999. They are being demon-

strated in dealer showrooms now and will go on sale in early 1999. RCA will also have an outboard DTV/DSS receiver that will sell for around \$700.

In addition to terrestrial DTV broadcasts, all three models will receive high-definition DSS signals from satellite TV content providers DirecTV and USSB. To receive the new HDTV services, subscribers will need a dish antenna with a "dual-feed horn" that can see two



satellites at once - the current DSS satellite at 101 degrees and a new one for highdefinition services at 95 degrees.

DirecTV says it will have one channel of HDTV programming by the end of the year, though it had not announced what it will be at our deadline. "It will depend on what's available from the studios," according to a spokesperson. DirecTV has also not decided whether high-definition services will be free, packaged separately for an additional monthly fee, or sold on a pay-per-view basis.

USSB said it will carry HBO's two high-definition channels and will preview the HBO high-def service at electronics dealers late this year, offering it to subscribers in early 1999. USSB has not made any other high-definition announcements, nor has it determined what it will charge for HBO's HDTV channels. "There's a possibility that this might not cost additional," USSB's Jackie Faubus told me.

Unity Motion The first satellite-TV service devoted solely to high-definition programming began transmitting September 26. St. Louis-based Unity Motion has one channel of 1080i HDTV programming, operating 24 hours a day, seven days a week. The company markets its hardware through a network of high-end dealers. Its high-definition monitor sells for \$6,995. A receiving system, consisting of a dish antenna and a



receiver, sells for \$2,495 and will also pick up terrestrial DTV signals.

When we spoke in late September, communications director Kim Gamel said that Unity Motion was "still in negotiation with program providers." The

company's HD1 channel will consist of movies, children's programming, and arts documentaries, she said. Unity Motion was planning to add two more channels by December, one devoted to movies, the other to sports. Regarding pricing for the service, Gamel said, "We don't anticipate charging until the second guarter of 1999, when we expect to have more channels."

DTV BROADCAST ROLLOUT SCHEDULE

Top 10 Markets (30% of U.S. households) by May 1999

- Atlanta
- Boston
- Chicago
- Dallas/Fort Worth
- Detroit

- Los Angeles
- New York
- Philadelphia
- San Francisco
- Washington, DC

Top 30 Markets (50% of U.S. households) by November 1999

- Baltimore
- Charlotte
- Cincinnati
- Cleveland
- Denver
- Hartford/New Haven
- Houston
- Indianapolis

- Miami/Ft. Lauderdale Sacramento/Stockton/ Minneapolis/St. Paul
- Orlando/Daytona
- Beach/Melbourne
- Phoenix
- Pittsburgh
- Portland, OR
- Raleigh/Durham
- Modesto, CA San Diego
 - Seattle/Tacoma
 - St. Louis

 - Tampa/St.Petersburg/ Sarasota

FOX Fox planned to begin digital broadcasts in November over three stations: WTXF in Philadelphia, WJBK in Detroit, and KDFW in Dallas, News **Technology Group VP Andrew Setos** told us that Fox will comply with the FCC's DTV rollout schedule and will be broadcasting digital signals in the top ten markets by May 1, 1999. But, he cautioned, "not all of them will be on-air by then if they can't get equipment or tower sites."

Fox's HDTV programming will be in the 720p format. "Digital television is about making better pictures." Setos explained. "As engineers and producers, we believe strongly that progressive scanning makes better pictures than interlaced scanning." Consumer displays with 1080p capability are several years away, he said, which leaves a choice of 1080i or 720p for HDTV broadcasts.

"In the DTV standard, the highest and most resolving format is 1080p and the lowest is 480i," Setos added. "Where the rest lie is a matter of debate. We have a sliding plan so that within a year all our programming will be progressive-scan." Most will be in 480p format.

In the meantime, Fox's digital stations will use the lowest-resolution 480i format. The images will still look substantially better than with conventional TV, Setos noted, because Fox already disseminates programming to its stations in digital form. "Ally McBeal goes from film to digital all the way to our stations. With DTV, it will be digital all the way to viewers' homes."

Setos wouldn't say what HDTV programming Fox will offer. "We consider this a competitive issue," he told us. "It's like in the 1950s, when what networks were planning to show in color was a closely guarded secret."

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REVIEWER'S CHOULE Our equipment reviewers pick their favorites from the past year's crop

Sony MZ-R50 portable MiniDisc recorder

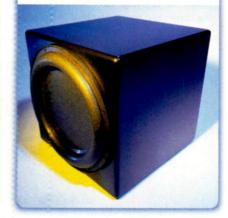
(original review, 6/98) The MZ-R50 (\$400) is a miracle of engineering. Its shiny metal case nestles in the palm of your hand like a small Walkman, yet it contains a complete digital recording and playback system and a plethora of features. This little beauty exemplifies what the MiniDisc is all about. Slip in an MD and record through its analog, digital, or microphone input. A nifty top-mounted thumbwheel lets you quickly dial up desired tracks and also enter titles. An LCD screen provides a full status report. Editing features let you add or erase recorded material or change the order of tracks. A 40-second buffer makes the MZ-R50 essentially skip-proof, and the internal battery provides 4 hours of recording time or 7 hours of playback. Best of all, its ATRACencoded recordings sound quite good — they'll certainly blow away any made by a portable cassette recorder.

- Ken C. Pohlmann



Sunfire True Subwoofer-Signature

(original review, 11/98) The Sunfire True Subwoofer-Signature (\$1,895) is from the mind and soul of Bob Carver. In other words, it is an original, wonderful, and slightly offbeat audio product. Specifically, this 13-inch cube weighs in at 53 pounds, suggesting that it is made of solid kryptonite or something. Instead, it contains several things that are even more awesome: a hard-hitting power amplifier (which Carver rates at 2,700 watts) driving a 10-inch subwoofer that in turn drives a passive 10inch radiator. Together, they're rated to deliver a solid 18 Hz at about 120 dB SPL. When I powered up this little tornado, it literally shook my room and everything in it (I'm sending Stereo Review the dentist bill for all those loose fillings). If you live in Arizona and would like some Pacific beachfront property, buy a True Subwoofer-Signature and crank it up about halfway. If you live in California, be afraid, be very afraid. - Ken C. Pohlmann



Kenwood VR-209 A/V receiver

(original review, 9/98) Dolby Digital receivers are a dime a dozen these days, and the littlest Kenwood is similar to plenty of other entry-level examples. It has decent power (100 watts each for five channels), basic features and functions, including both Dolby Digital and Pro Logic decoding, and adequate inputs and outputs for a modest system - though only two full-function digital inputs. So why does the VR-209 rate a pundit's pick? Because it does all that for only four big ones (\$399) - easily half of what similar functionality cost a year ago - and with few important performance compromises.

— Daniel Kumin



Philips CDR 765 dual-tray CD recorder

(original review, 10/98) Considering convenience and sound quality together, there's no better way to make a CD compilation of your favorite songs than on the Philips CDR 765 (\$650), the world's first "dual-transport" CD recorder. It allows bit-accurate dubbing at twice normal playing speed onto write-once CD-Rs and erasable CD-R/Ws with a convenience that even computerbased CD copying can't match. And with bit-accurate dubbing, the copies will sound identical to the originals. My original review pointed out a few minor faults with our preproduction test sample. A later sample did have the most important one fixed: dubs of those rare discs containing pre-emphasis came out correctly. And even with its few remaining quirks, the CDR 765's ability to quickly churn out dubs that you can play anywhere a normal CD will play is, so far, unique. Extremely easy to use and ideally suited to its primary purpose — making compilation discs — the CDR 765 is priced no higher than many *non*recording, single-disc CD players. — *David Ranada*



Yamaha DSP-A1 Dolby Digital/DTS integrated amplifier

(original review, 6/98) I rarely encounter a component, like the Yamaha DSP-A1 (\$2,599), that incorporates the best the audio industry can do in many areas at once. At a measured 116 watts per channel with all five channels driven simultaneously, the DSP-A1's power-amplifier section has enough oomph for all but the least sensitive speakers in the largest listening rooms. Equally important is its unusually low background noise level. The resulting enormous dynamic range perfectly suits the DSP-A1's built-in Dolby Digital and DTS decoding.

As if that weren't valuable and rare enough, the DSP-A1 contains the most refined versions of Yamaha's Digital Sound Field processing that I've heard since the technology's introduction in 1986. As I said in my review, when used on music this multispeaker ambience-generation system "has the uncanny ability to move you into the same acoustic space as the performers." Nothing I've seen since then has displaced the DSP-A1 from its position as "my favorite home theater amplifier." — David Ranada

Boston Acoustics VR-960

(original review, 3/98) Surprisingly, one of the last of the thousands of components I reviewed in my nearly 40 years with Stereo Review proved one of the most interesting. Loudspeakers are, after all, the most critical components of any music system. The Boston Acoustics VR-960, though not the largest or most expensive I have tested, offers perhaps the best combination of sound guality, size, and price. At a very reasonable \$1,000 a pair, the VR-960 provides a rare mix of smooth frequency response, deep and clean bass, compact dimensions, practical weight, and attractive styling. — Julian Hirsch



B&W ASW2000, PSB Stratus SubSonic 3i, and Klipsch KSW300 powered subwoofers

(original review, 3/98) This year manufacturers gave us powered subwoofers with better output in smaller packages at lower cost. That trend was nowhere more evident than in the three best models I tested for "Block Busters" in the March issue. While these subs didn't go deeper into the bottom octaves than previous \$1,000 subs, they had much greater output levels (measured at 2 meters in a real room). With program material the B&W ASW2000 (\$1,000) cranked out a 114-dB sound-pressure level (SPL), the PSB Stratus Sub-Sonic 3i (\$999 in piano black. \$899 in standard finish) blazed away with 115 dB, and the Klipsch KSW300 (\$999) whacked out an amazing 116 dB.

The B&W and PSB subs set new standards for electronic sophistication and eloquent style. They play loud and look great. The PSB even struts its stuff inside a tiny 2-square-foot floor area. The Klipsch is less smoothly finished, but nothing else at any price beats it for output from 40 Hz upward. — Tom Nousaine



Technics SF-DX6 digital surround sound package

(original review, 10/98) The cardboard box this \$600 package comes in says "Technics SF-DX6," but inside you'll find two components, the SA-AX6 receiver (\$500 alone) and SH-AC500D surround processor (\$350 alone). This dynamic duo marries a traditional A/V receiver with a very contemporary signal processor. The SA-AX6 is a visually striking and ergonomically designed piece of gear, with a large volume knob and slick blue lighting. There's also a subwoofer-level knob and concealed knobs for adjusting bass, treble, and balance as well as the cutoff of the subwoofer low-pass filter.

The SA-AX6 provides Dolby Pro Logic decoding but lacks the now all-important Dolby Digital processing, which is supplied by the separate SH-AC500D. Although more utilitarianlooking than its mate, the processor does the honors with both Dolby Digital and DTS decoding. The only downside is that you have to juggle two separate remote controls instead of one integrated remote. Still, this duo makes a very cute couple.

— Ken C. Pohlmann





Harman Kardon Festival 60 minisystem

(original review, 8/98) In one sense Harman Kardon's Festival 60 (\$1,399) is little more than a really high-class CD player/ table radio. But from another angle, I found it to be an exceptionally well-conceived music system. It looks sexy enough to tempt the well-heeled but clueless buyer (its price takes it way out of the "boombox" category), who will end up taking home a "sneaky good" audio system that includes a pair of serious bookshelf speakers, a very decent CD player, and an adequate (though no better) AM/FM receiver. Most important, it's all integrated into a very handsome and wonderfully user-friendly package. Things work just as you'd expect, and controls and displays that are not needed for a particular operating mode automatically dim to reduce visual clutter. There's no reason those who aren't clueless about hi-fi, like Stereo Review readers, can't enjoy this stealth system, too. You could give one to yourself, or to a friend or family member you really, really like. — Daniel Kumin



(original review, 6/98) What surprised me most about Panasonic's DVD-A310 (\$600) was not its video performance, which was right up there with the best, but how well it played CDs. Its distortion and noise levels were very close to theoretical perfection with standard 16-bit CDs — and considerably better than many ultra-expensive CDonly players with so-called 20-bit CDs. You can replace your CD player with the DVD-A310 in the sure knowledge that you aren't giving up any CD audio quality. In fact, you're likely to be improving it.

Add this audio performance to the player's full panoply of disc-transport features (including the very rare reverse slow motion), the most informative on-screen display I've found on a DVD player, the easy setup procedure, one of the better DVDplayer remote controls I've handled, and a reasonable list price, and you'll reach the same conclusion I did: Panasonic's DVD-A310 is "one of the best DVD players you can buy." — David Ranada

Altec Lansing ADA310 multimedia speakers

(original review, 10/98) The Altec Lansing ADA310 (\$299) breaks new ground for multimedia sound. This threepiece system features satellites with angled drivers so they can reproduce both front and surround channels at once, a USB input, on-screen graphical user interface, and a handheld remote control. It also has a digital input and built-in Dolby Digital decoding so that you can hook up a DVD player directly or make good use of a DVD-ROM disc. For three bills you get a mini surround sound system that acts like it's hi-fi and not just a set of computer speakers. — Tom Nousaine





Onkyo ED-301 Dolby Digital surround processor

(original review, 8/98) The good news is that Dolby Digital sounds terrific, and many DVD titles (especially many newer movies) are encoded with Dolby Digital (DD). The bad news is that many of us have perfectly good A/V receivers with reasonably good tuners, plenty of muscle power, and Dolby Pro Logic decoding, but they lack DD circuitry. What's a home theater nut to do? One elegant solution is the Onkyo ED-301 (\$400). This modestlooking component supplies the essential DD decoding, along with reasonably good ambience processing, and it also packs all the input and output connections that you're likely to need. The only possible downside: lack of DTS decoding. But given the multitude of DD recordings — and the use of Dolby Digital in DTV — you'll always have plenty of program material even without DTS capability. Before you toss out your perfectly good Pro Logic receiver, check out the ED-301.

— Ken C. Pohlmann

Paradigm LCR-350/PDR-12 home theater speaker system

(original review, 9/98) Priced at just \$1,914, this Paradigm system succeeds where most expensive home theater speaker packages fail - it sounds exceedingly musical and ruthlessly accurate whether you feed it music CDs or movie soundtracks. Paradigm's newest generation of speakers, with their improved metal-dome tweeters and polypropylene woofers, are its best-sounding yet, and the LCR-350 satellite is one of the few on the market at any price that can work equally well in any of the five main-channel positions for Dolby Digital playback. Five LCR-350s plus the excellent PDR-12 subwoofer gave me far and away the best multichannel audio experience l've heard at this price. (If you prefer dipole surrounds, the Paradigm ADP-350s shown on top in the photo use the same drivers as the LCR-350, but with dual tweeters, and list for \$100 more a pair.) - Corey Greenberg

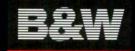


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PRIMES

45

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Stocking Stutterz

by Teri Scaduto

he stockings are hung by the chimney with care ...

but what goodies can you put inside them that will be sure to please? For that matter, what can you give to a fellow electronics buff that isn't either too big for your budget or too . . . well, boring? Not that there's anything inherently wrong with giving such "boring" necessities as blank recording media, cleaning and maintenance equipment, or spare batteries for portable gear. In fact, these days you have a lot of options when buying those staples. Recordable media no longer means just tape (audio, video, or DAT); now it's MiniDiscs and CD-R/RWs, too. And as for batteries, there are plenty of rechargeable options along with the omnipresent alkaline cells.

If you're looking to surprise as well as please the recipient, here's an assortment of items — some practical, some whimsical, some clever, some unique — that are all sure to appeal to anyone who appreciates electronic gadgetry. They'll fit into an average-size Christmas stocking, and we guarantee that you'll find something to fit your budget — and perhaps even your own stocking as well.

Three Days of Play

Do you know someone who packs more changes of batteries than socks when he goes on vacation? Someone who's singlehandedly clogging landfills with batteries drained by his personal stereo? He'd surely appreciate receiving the RZ-SX50V radio/cassette player from Panasonic — it's said to play for nearly three straight days on one alkaline AA cell and the included flat, nickel-cadmium rechargeable battery. The palm-size unit uses Panasonic's Power Star system, which combines a highly efficient tape-transport motor with low-load circuitry to significantly increase battery life. Think long weekends away with no spare batteries!

The RQ-SX50V mates an 18-preset digital FM tuner with an autoreverse cassette player that features 15X fast-forward and rewind speeds. There's also an XBS bass-boost system for deep bass response even at low volumes. A wired, four-key remote control is included. Price: \$150.

Panasonic, Dept. SR, One Panasonic Way, Secaucus, NJ 07094; phone, 800-211-7262; Web, www.panasonic.com



Command Central

What do you get the person who has everything or at least everything electronic? How about a way to control every component, old or new, and to relegate a whole stack of dedicated remote controls to

the back of a closet? Universal Remote Control's Home Theater Master SL-9000 is preprogrammed to operate more than a thousand different audio and video components, including high-end gear that's not covered by most universal remotes. The SL-9000 can learn up to 376 commands from other remote controls and can execute strings of commands (macros).

As many as eight different devices can be controlled, including not just the standard TV, VCR, and A/V receiver but also TV/ VCR combinations, cable boxes, Internet set-top boxes, C-band and direct-broadcast satellite receivers CD and MiniDisc changers, DVD players, and even X-10-like homecontrol devices. The SL-9000 can be pro-

grammed to control such secondary functions as surround-sound level adjustments, picture-in-picture selection, and VCR timer and tracking settings. Each of the 25 memory buttons can be programmed to send out up to ten sequenced commands. Price: \$140. Universal Remote Control, Dept. SR, 271 North Ave., New Rochelle, NY "0801; phone, 800-901-0800; Web, www.universel-remote.com

DECEMBER 1998 STEREO REVIEW 79



<u>Countdown to 2000 (or 2001)</u>

Do you know someone who already has reservations for New Year's Eve 1999? Don't laugh: New York's fabled Rainbow Room has been booked solid for the big event since 1995, and you can forget about seeing in the new century at Disney World or the Seattle Space Needle unless you already have reservations.

A great gift for anyone who's planning to see in the next millennium with a bang might be Countdown Clocks International's Millennium 2000, which continuously displays the exact number of days, hours, minutes, and seconds remaining until the next century. It works whether you choose to celebrate on December 31, 1999, like most people, or at the technically correct turn of the century a year later. Looking to please the scientific community as well as the partying public, Countdown Clocks included both a "celebration" mode and an "academic" mode. (And for twice the partying, you can make it count down to New Year's two years running.) Unlike many of today's computers, this small, sleek timepiece won't become a useless hunk of junk when its digital counters turn to "00." Simply switch it out of countdown mode, and it will display the current date and time in your choice of 12- or 24-hour mode. Price: \$25.

Countdown Clocks International, Dept. SR, 231 Mineola Blvd., Mineola, NY 11501; phone, 888-313-2001; Web, www.countdownclock.com

A Soothing Scent-sation

You can give the gift of scent without resorting to those overdone standbys, perfume and cologne. The Philips AT500 Aromatherapy System gives a contemporary twist to the age-old practice of aromatherapy, which uses scents to create or enhance specific moods. The decorative glass shade filters a soft light, while an internal fan gently diffuses aromas throughout the room.

Four different types of scented beads are included. After a hard day at work, drop in Relaxing Lavender to promote calm and balance, or Rose Garden to strengthen your inner being and encourage patience and love. Before tackling those monthly bills or home-office chores, activate Uplifting Mint to refresh your memory and enhance your concentration. Decide for yourself when to use Sensual Blend, a combination of ylang ylang, sandalwood, and cloves that's, ah, supposed to relieve tension and induce a sense of harmony. Price: \$50.

Philips, Norelco Division, Dept. SR, 1010 Washington Blvd., Stamford, CT 06912-0015; phone, 800-243-7884; Web, www.norelco.com

Blown Away

Gust Air Duster from Stoner offers a breeze o² a way to keep all of your gear — cameras, computers, tools, and appliances as well as A/V stuff — dust-free. A well-aimed burst of this high-pressure propellant can blow away dust and dirt that have accumulated on hard-to-reach surfaces. A variable-pressure trigger mechanism lets you adjust the force from a gentle puff to a powerful blast. The colorless, moisture-free Dustex11 propellant requires no wiping.



A Gust cleaning kit, including three 15-ounce cans of Gust and (for a limited time) a 10-ounce can of Xenit glass cleaner, costs \$19.95 (plus \$4.50 shipping and handling). One can provides about 500 cleaning bursts.

Stoner, Dept. SR, 1070 Robert Fulton Highway, Quarryville, PA 17566; phone, 888-478-6637; Web, www.stonersolutions.com

Talk Radio

Radios aren't just for listening anymore. The Family Radio Service (FRS) is a radio band that was recently classified by the FCC specifically for two-way family and recreational use, with no license required. With Motorola's TalkAbout two-way radios, it's easy to keep in touch with friends and family members when you're out skiing, hiking, camping, or just roaming around the mall.

TalkAbout radios are small enough to carry in a shirt pocket and weigh less than half a pound, including batteries. They're similar in concept to walkie-talkies, but because they use FM, they're much more reliable and deliver clearer sound. The 14channel radios have a range of up to two miles, depending on terrain and conditions. Ard, unlike cellular phones, there are no monthly fees or access charges to pay. Each TalkAbout radio costs \$100.

Mctorola, Dept. SR, 1301 E. Algonquin Rd., SH3, Schaumburg, IL 60196; phone, 800-353-2729; Web, www.mot.com/talkabout

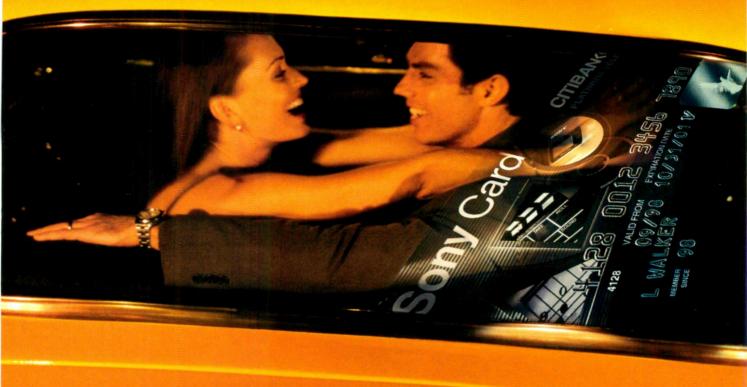
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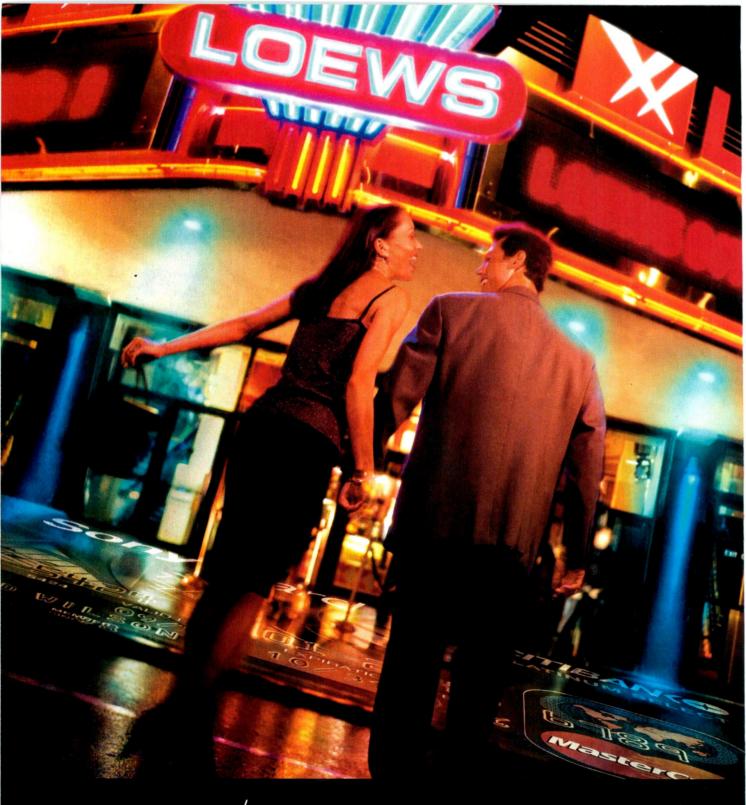


80 STEREO REVIEW DECEMBER 1998

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ON RADIO CALL





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Grab some popcorn and take a seat because now there's a new way to enjoy the entire, magical world of Sony. Introducing the Sony Card, only from Citibank. Every time you use the Sony Card you'll earn Sony Points which are redeemable for movie tickets that can be used at all Sony, Loews, Cineplex Odeon, Magic Johnson and Star Theatres. And since Sony also creates the movies themselves, check out STEPMOM, starring Julia Roberts and Susan Sarandon opening at a theatre near you this holiday season from Sony's Columbia Pictures.



AND MAGIC F LLS YOUR EVERY NIGHT.

With the Sony Card you can also earn points towards Columbia TriStar home videos and DVDs. So kick off your shoes, sit back in your favorite chair and play at home with the latest movie releases or you-favorite all time classic on a Sony Home Entertainment system. To make your own magic, call -800-284-2778 and apply for the Sony Card.















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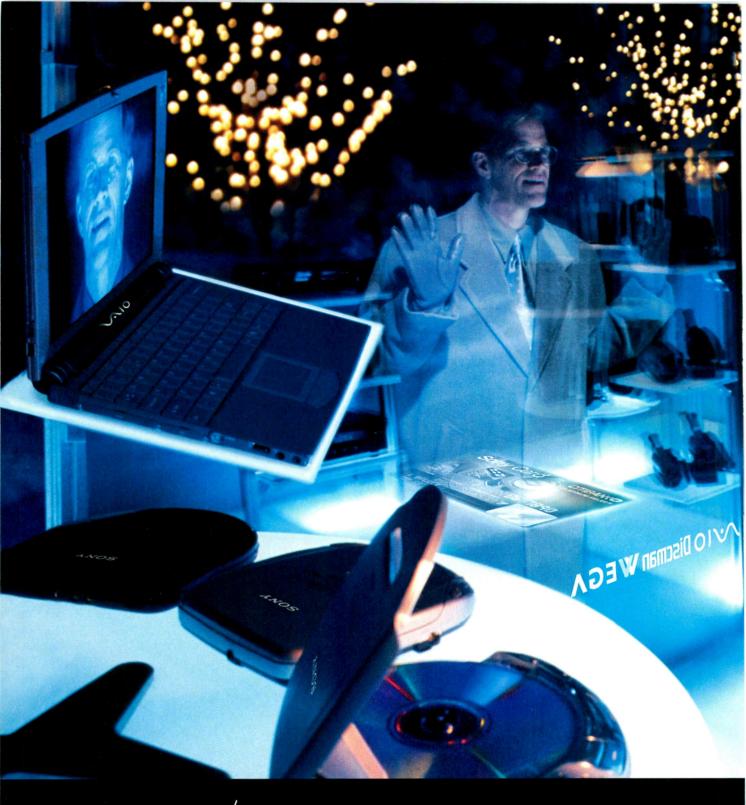


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Whatever it is that moves you, Sony Music has it. From the cutting edge to timeless masterpieces, they're available in record stores everywhere. And, by simply using your Sony Card you can earn points redeemable for even more of your favorite Sony CDs and tapes. So, come dance the night away. Call I-800-284-2778 to apply for the Sony Card.





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It appears before you as if in a child's dream. A world that stirs the imagination... and is filled with inspiration. This is the world of Sony electronics and it unveils itself to you everytime you use the Sony Card. Use the Sony Card to get the best in innovation including Sony MiniDisc recorders, Handycam[®] camcorders, Trinitron[®] TV's, VAIO[™] computers and more. So let your imagination run wild. Call 1-800-284-2778 to apply for the Sony Card.

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Color-Coordinated Carrying Cases

Fashion-conscious music fans will get a kick out of the Colors line of CD carrying cases from Case Logic. The Colors line includes cases of various sizes in an assortment of popular colors: plum, teal, charcoal, indigo, and black. They all feature the patented ProSleeve, a double-sided black sleeve that maximizes carrying space, enabling the organizers to hold twice as many CDs in the same amount of space as previous models. A soft liner on both sides of the pockets protects the surfaces of the discs, and convenient thumb tabs make it easy to pop them in and out of the case.

Four models are included in the Colors line. The CDX-24/12, which holds 24 CDs (or 12 CDs with their booklets), costs \$13. The CDX-48/24 doubles the storage capacity and costs \$20. Both are available in all five colors. The two larger sizes are available in plum and teal only. The CDX-72/36 (72 discs, 36 with booklets), priced at \$30, has a carrying handle and an interior pocket large enough to hold keys, credit cards, or cash. The CDX-200/100 (200 CDs or 100 CDs with booklets) adds a detachable shoulder strap; it costs \$55. Also part of the Colors line (although it comes only in black with teal trim) is the DMX-1, which holds a portable CD player as well as CDs in jewel boxes, removable ProSleeves, or a CD wallet. Including a belt loop, a detachable shoulder strap, an outer snap loop to hold headphones, and zippered access to jacks, it costs \$20.

Case Logic, Dept. SR, 6303 Dry Creek Parkway, Longmont, CO 80503; phone, 800-447-4848; Web, www.caselogic.com



Get in the Loop

Here's another way to make a musical fashion statement: the Loopmaster portable CD player from Pioneer. It comes in two basic styles and can be customized with colorful inserts. The X-Ray Series (\$100) is fully transparent, and the Solid Series (\$120) is opaque except for a transparent lid. Each player boasts such standard features as 24-track random-access programming, 10-second shockproof memory, bass boost, and track-number and time display. A remote control, headphones, and AC adapter are included.

Pioneer, Dept. SR, 2265 E. 220th St., Long Beach, CA 90810-1639; phore, 800-746-6337; Web, www.pioneerelectronics.com

Storm Marning

ALL HAZAR

6

NOAA

It's always a good idea to keep a portable radio (with fresh batteries!) on hand for use during power outages. The All Hazards/Weather Emergency Alert Monitor (WR-8000) from Oregon Scientific goes one better: it provides advance warning when the kind of rough weather that often causes blackouts (and much more serious trouble) is headed your way.

For the past two years, the National Oceanic and Atmospheric Administration (NOAA) has been broadcasting regional and local warnings about severe weather and other emergencies that pose a threat to public safety, including bulletins from the U.S. Emergency Alert System and the Federal Emergency Management Agency (FEMA). Those messages have been added to the existing NOAA Weather Radio system, which provides weather forecasts, travel conditions and storm warnings around the clock and across the country.

The WR-8000 can be set to listen to the NOAA Weather Radio "all-hazards" network for a specialwarning broadcast. When it detects it, it activates a loud tone and flashes a red LED. If the radio is in standby mode, the speaker automatically turns on and sounds the warning. It just might give you or someone you love enough time to reach the safety of a basement or shelter before a tornado strikes.

The bright-yellcw handheld unit, which has a suggested retail price of \$70, can be used outdoors while hiking, camping, or traveling in an RV. A desktop version, the WR-3000, costs \$50.

Oregon Scientific, Dept. SR, 18383 S.W. Boones Ferry Rd., Portland, OR 97224; phone, 800-853-8883

Signal Strengthener

Give a serious radio listener the gifts of increased range and clarity. Parsec's Pathfinder amplified FM/AM antenna strengthens weak FM signals. With its circular element tilted horizontally, the Pathfinder is omnidirectional. The listener can also target a particular station by raising the element to its vertical position and turning it toward the station's transmitter.

The Pathfinder has adjustable gain and tuning controls. Raising the gain control increases the clarity of weak or distant FM stations; lowering it prevents tuner overload and eliminates intermodulation distortion in the presence of

strong local FM signals. Tuning the antenna effectively increases receiver selectivity and helps to protect the station of choice against interference from strong adjacent stations. Price: \$60.

Recoton, Dept. SR, 145 E. 57th St., New York, NY 10022; phone, 800-231-0031; Web, www.recoton.com

Jower Plackage

Know someone who doesn't like to stay at home but doesn't want to give up the conveniences of home, either? The Portawattz 300 DC-to-AC power inverter from Statpower Technologies will provide complete portability for any household appliance or electronic component he might want to bring on his travels. Whether he wants to rig up Christmas lights on his RV, host tailgate parties with fresh-made daiquiris and music blasting from his home stereo system, or take his home-office gear along on a camping trip, the Portawattz 300 can provide the AC power needed to make it happen.

The power inverter plugs into a car's cigarette lighter or any other 12-volt source and converts the battery power into AC power. Delivering 300 watts continuous, or 500 watts on brief peaks, the Portawattz 300 can power VCRs, video games, stereo systems, satellite equipment, fans, lights, cellular phones, small TVs, camcorders, compact drills, blenders and mixers, sewing machines, computers, printers, monitors, and . . . well, you get the idea. There's no need to worry about running down the vehicle's battery. The inverter automatically shuts down before the battery is completely drained, always leaving enough juice to start up the engine. Price: \$90.

Statpower, Dept. SR, 7725 Lougheed Hwy., Burnaby, British Columbia V5A 4V8; phone, 604-420-1585; Web, www.statpower.com





More than Music

If there's a soap-opera addict or weather buff on your gift list, consider Aiwa's HS-TX786 headphone radio/cassette player, which provides more than music: it also offers a TV/weather audip band. When the user isn't monitoring stormy weather (or stormy small-screen relationships), he can use the digital AM/FM tuner to recall any of 30 station presets. The HS-TX786 includes an autoreverse cassette deck with Dolby B noise reduction as well as a Multi Sound Processor with settings for classical, rock/pop, and jazz listening. The remote control built into the headphone cord allows the user to operate the tuning and volume controls without taking the radio out of his pocket. Two AA batteries are said to provide up to 22 hours of playback. Price: \$80.

Aiwa, Dept. SR, 800 Corporate Dr., Mahwah, NJ 07430; phone, 800-289-2492; Web, www.aiwa.com

Mhere in the Morld?

Hikers, bikers, campers, hunters, and others who travel via highway or mountain trail can find out precisely where they are with the GPS 300 from Magellan Systems. The portable receiver puts the U.S. government's Global Positioning Sys-

tem right in the palm of your hand for \$140.

The GPS 300 features wraparound rubber armoring and a waterproof case for survival in the wilderness or a big city. The

handheld unit can track up to 12 GPS satellites simultaneously EZStart initialization gets you up and running in no time, and other software features help point the way to anywhere you want to go - and can get you back again, too. Three high-contrast, back-lit graphic navigation screens d splay distance, bearing, heading, speed, time, time remaining, and elevation. The GPS 300 lets you plot out a single route with ten individual legs and mark your favorite locations - that perfect fishing hole, perhaps? so that you can find them again.



So that you can find them again. Magellan, Dept. SR, 960 Overland Ct., San Dimas, CA 91773; phone, 909-394-5000; Web, www.magellangps.com



You know you're gonna get it — or give it. So which boxed set will it be? by Ken Richardson and Robert Ripps

Ken Starr delivered 36 boxes to Congress. We can match that! On these pages we deliver 36 boxed sets for your holiday-shopping consideration. *The Starr Report* does mention Billie Holiday, Annie Lennox, Sarah McLachlan, and the Rockettes, but *The Richardson/Ripps Report* covers everything from John Lennon and John Coltrane to Hank Williams and William Kapell. Miles and Mahler to Disney and Duke. Booker T. & the MGs to XTC. Not to forget — are you ready? — Blue Note, Black Crowes, and Kronos Quartet to Bernstein, Bacharach, Tommy Boy, and the Boss. Prices given (where available) are suggested retail, meaning that discounts are likely. So whether you're an early shopper or the subject of grand-hurry proceedings, take our list to the stores with you.

NUGGETS: ORIGINAL ARTYFACTS FROM THE FIRST PSYCHEDELIC ERA 1965-1968

(*Rhino, four CDs, \$60*) The 1972 double LP compiled by Lenny Kaye is now a four-CD box. "Pushin' Too Hard," "Dirty Water," "Psychotic Reaction," 125 more.

JUDY GARLAND Judy

(32, four CDs, videocassette, \$80) From age 7 to a few months before her death. Book includes essays by Camille Paglia and *Stereo Review*'s Will Friedwald. A videotape has highlights from Judy's TV show.

DISNEY'S 75 YEARS OF MUSIC & MEMORIES

(*Walt Disney, three CDs*) Comprehensive anthology, available only at Disney stores.

THE BLACK CROWES

Sho' Nuff: The Complete Black Crowes (American, four enhanced CDs, EP, \$50) Spiffed up: Shake Your Money Maker,

BRUCE SPRINGSTEEN Tracks

(*Columbia, four CDs*) Attention, fans: 56 of the 66 songs here are unreleased studio recordings spanning the Boss's 25-year career. You also get ten B-sides plus a book of liner notes, lyrics, and rare photos.

BOOKER T. & THE MGs Time Is Tight

(*Stax, three CDs, \$50*) Sure, you know they did "Green Onions" and "Hang 'Em High," but did you know they covered *Abbey Road*? Dig in.

HANK WILLIAMS The Complete Hank Williams

(*Mercury, ten CDs, \$170*) The founder of modern country is honored in a limitededition beauty of a box with 53 unreleased tracks and detailed music notes by Williams biographer Colin Escott.





Home demos, studio outtakes, live tracks, and TV tapes are unearthed for *The John Lennon Anthology* (Capitol, four CDs), which covers 1969 to 1980. Each disc has a theme: "Ascot," "New York City," "The Lost Weekend," and "Dakota." Liner notes by Yoko Ono, essay by Anthony DeCurtis.

JOHN SOLO

The Southern Harmony and Musical Companion, Amorica, and Three Snakes and One Charm, each with bonus tracks and videos. Bonus bonus: five-track live EP.

KTC Transistor Blast

(*TVT, four CDs*, \$45) BBC Radio sessions, bridging late '70s to late '80s. The box itself resembles a transistor radio.

QUEEN The Crown Jewels

(Hollywood, eight CDs, \$120) Remastered for the band's 25th anniversary are Queen, Queen II, Sheer Heart Attack, A Night at the Opera, A Day at the Races, News of the World, Jazz, and The Game. Lyrics, essays.

RAY CHARLES The Complete Country & Western Recordings 1959-1986

(Rhino, four CDs, \$50) Exactly what it says,

including both volumes of *Modern Sounds* in *Country & Western Music*, a bio with an exclusive interview, and track-by-track notes.

THE ISLEY BROTHERS It's Your Thing: The Story of the Isley Brothers

(Columbia/Legacy, three CDs, \$45) "First family of funk" presents its encyclopedia of pop, rock, and soul. A young guitarist called Jimi Hendrix appears on the earliest tracks.

BURT BACHARACH The Look of Love: The Burt Bacharach Collection

(*Rhino, three CDs, \$50*) Now that Burt's all the rage, this gathers the songs he wrote for Dionne Warwick, Dusty Springfield, Jackie DeShannon, and 33 more artists.

RANDY NEWMAN

Guilty: 30 Years of Randy Newman

(Rhino, four CDs, \$60) Two discs of "The Studio Recordings," one of "Odds & Ends," and one of "Film Music." Notes by Timothy White, Lenny Waronker, and Russ Titelman.

GLOBAL VOICES: A VOX SET

(Music of the World, three CDs, \$40; www.musicoftheworld.com) From Bali to Zimbabwe: traditional, sacred, and contemporary vocals.



THE BLUE NOTE YEARS

(Blue Note, 14 CDs, \$225) The heavyweight of this year's jazz boxes previews Blue Note's celebration of its 60th anniversary in 1999. Seven themes: "Boogie, Blues, & Bop," "The Jazz Message," "Organ & Soul," "Hard Bop & Beyond," "The Avant Garde," "The New Era," "Blue Note Now as Then."

HERBIE HANCOCK The Complete Blue Note Sixties Sessions

(*Blue Note, six CDs, \$90*) All the recordings

that became Takin' Off, My Point of View, Inventions & Dimensions, Empyrean Isles, Maiden Voyage, Speak Like a Child, and The Prisoner, with alternate takes.

CHICK COREA AND ORIGIN A Week at the Blue Note

(*Stretch, six CDs, \$60*) Corea in early 1998 with reedmen Steve Wilson and Bob Sheppard, trombonist Steve Davis, bassist Avishai Cohen, and drummer Adam Cruz.



Afrika Bambaataa, De La Soul, and Queen Latifah are just a few of those providing Tommy Boy's *Greatest Beats*, available on four separate CDs or in a miniature milk crate (\$70) with a fifth CD of new remixes by Dimiti from Paris and others.

BEATS IN A CRATE

CHARLIE PARKER The Complete Live Performances on Savoy

(*Denon, four CDs*, \$50) Royal Roost dates of 1948-49 plus a 1947 concert with Dizzy Gillespie and a rare 1950 Chicago tape.

JOHN COLTRANE The Classic Quartet: Complete Impulse! Studio Recordings (Impulse!, eight CDs, \$90) The quartet had the saxophonist joined primarily by

MILES OF BITCHES

Return to the days when fusion was an actual fusing of jazz, rock, funk, R&B, and everything else that was in Miles Davis's head in 1969-70. *The Complete Bitches Brew Sessions* (Columbia/Legacy, four CDs, \$70) adds six cuts from other sources and nine unreleased tracks to the double LP. 100-page book.





pianist McCoy Tyner, bassist Jimmy Garrison, and drummer Elvin Jones in sessions from '61 to '65. There's a disc of unreleased material plus an interview with Jones and notes by Bob Blumenthal.

MAHLER TRIPLET

This is a good year for Mahler fans on your shopping list. Leonard Bernstein conducts the complete symphonies with the Vienna Philharmonic, Royal Concertgebouw, and New York Philharmonic orchestras. Also included in this deluxe package are Das Lied von der Erde plus two song cycles with baritone Thomas Hampson (Deutsche Grammophon, 16 CDs, midprice). Another sound choice is Klaus Tennstedt's set with the London Philharmonic (EMI, 12 CDs, midprice). And The Mahler Broadcasts, 1948-1982 features a who's who of conductors from Stokowski to Solti. Two books (500 pages) are inside the set (New York Philharmonic, 12 CDs, \$225; phone, 800-557-8268; www.newyorkphilharmonic.org).



LOUIS ARMSTRONG An American Icon (*Hip-O*, three CDs, \$50) The postwar years, '46 to '68. Compiled by George Avakian.

Charlie Parker, Dizzy

Gillespie, Oscar

Peterson, Nat King

Cole, Billie Holiday

(stop me - no, don't

Mingus, Lester Young,

stop me!) Coleman Hawkins, Charles

(okay, you get the

idea). We're talking

The Complete Jazz at

ELLA FITZGERALD/DUKE ELLINGTON

The Côte d'Azur Concerts on Verve (*Verve, eight CDs, \$136*) Of the 96 tracks from 1966, 72 are unreleased, and all are 20bit remastered. A rehearsal tape fills Disc 8.

HANK MOBLEY

The Complete Blue Note Fifties Sessions (Mosaic, six CDs, \$96) BUD SHANK

The Pacific Jazz Studio Sessions (*Mosaic, five CDs*, \$80)

CHARLIE VENTURA/FLIP PHILLIPS

The Complete Verve/Clef Studio Sessions (Mosaic, six CDs, \$96)

Four saxophonists are boxed by the mailorder label (phone, 203-327-7111).

THE WEST COAST JAZZ BOX

(*Contemporary, four CDs, \$65*) From Dexter Gordon in 1950 to Joe Pass in 1964 by way of Gerry Mulligan, Dave Brubeck, Chet Baker, Art Pepper, Vince Guaraldi, others.

Classical

BRAHMS Complete Solo Piano Music; Two Piano Concertos

Idil Biret; Polish National Radio Symphony, Antoni Wit cond. (*Naxos, 12 CDs, budget price*). Biret adds Brahms to her complete editions of Chopin and Rachmaninoff.

THE WILLIAM KAPELL EDITION

(*RCA Victor, nine CDs, full price for eight, one bonus disc*) Kapell was killed in a plane crash in 1953 at the age of 31. A total of 81 pieces of music recorded between 1944 and 1953 have been remastered, including 36 unreleased selections. The bonus CD includes an interview, alternate takes, and a private home recording.



-

the Philharmonic on

The 240-page book

Norman Granz by

Stereo Review

Nat Hentoff.

the writer (and early

ccntributing editor)

includes an interview with JATP founder

(Verve, ten CDs, \$170).

Verve 1944-1949

UNABBREVIATED

"I've always wanted the string quartet to be vital, and energetic, and alive, and cool, and not afraid to kick ass," says violinist David Harrington, who founded the Kronos Quartet in 1973. He and fellow violinist John Sherba, violist Hank Dutt, and cellist Joan Jeanrenaud have been doing just that for 25 years. Their commitment to contemporary music has been nothing less than extraordinary. Besides the quartets of Gorecki, Glass. and Schnittke, Reich's Different Trains, Feldman's Quintet, and Crumb's Black Angels, the boxed set 25 Years (Nonesuch, ten CDs, \$100) includes two premieres and new recordings of works by Piazzolla, Pärt, Riley, and Sculthorpe.

KRONOS AT 25

HILDEGARD VON BINGEN 1098-1998 Sequentia

(Deutsche Harmonia Mundi, eight CDs, midprice) Just in time for the 12th-century abbess's 900th birthday comes this set of her complete works from the pre-eminent interpreters of her music.

DECEMBER 1998 STEREO REVIEW 85

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BEST OF THE MONTH Bruce Hornsby/Spirit Trail

here's something awe-inspiring about a gifted, committed musician at the apex of his art. It's as if he's incapable of playing a false note or writing a mediocre song. Miracles can happen, as long as the artist remains focused and receptive to the muse. Bruce Hornsby sustains such a spell throughout two discs on *Spirit Trail* (RCA, 91 min), one of the truly stellar albums of the decade.

It's difficult to know just where to start heaping praise: the piano improvs that come spinning out like ten-fingered tornadoes, the delightful shock of the unexpected that Hornsby brings to his jazz-flavored pop compositions (or are they pop-flavored jazz compositions?), the evocations of the South, or the fact that he addresses his audience with a casual familiarity that refuses to short-sell its intelligence or attention span. The combination of all those assets with a particularly fecund bout of creativity sends Spirit Trail into a very high orbit. And among the 20 songs, there are no soft spots or the sort of filler that drives critics to wish that the average double album had been edited down to a single disc.

This double album is a musing, philosophical work filled with tangible characters in real-world settings: the snake-handling charismatic Christian of "Preacher in the Ring," the restless casts of "Funhouse" and "Pete and Manny," the first-person narrator of "Sunlight Moon" (Hornsby himself?) regretfully having to leave

the wife and kids to hit the road. Animating this world of people in motion is Hornsby's startlingly inventive piano. In his agile, limber playing, you can hear a metaphor for a society hurtling along a fast track. Hornsby himself seems to enjoy the ride, imbuing his characters with great humanity and giving their transient movements an affectionate, Kerouaclike spin. Maybe it's because he generously presumes that all of us, whether we know it or not, are on the spirit trail - a route of escape from evil, the notion deriving from Native American weavers who imprint mazelike designs on their work to assist trapped spirits.

Hornsby's solos are not New Agey bon-bons but nicely engaging pieces of pretzel logic. The final minutes of "Sad Moon" are a busy, two-handed scamper, and the galloping, gallivanting "Preacher in the Ring Pt. 1" is as frisky as a colt in an open field. A couple of songs, particularly "Rest-

ing Place" and "Line in the Dust," have hit potential, evincing the wistful, achingly melodic complexion that previously carried Hornsby onto the charts (though, oddly, not since 1990).

Spirit Trail was largely recorded at Hornsby's home studio just outside Williamsburg, Virginia, and it is the best argument I've yet heard against commuting to work. From this collection of fresh-sounding takes, it's not hard to imagine Hornsby padding from the bedroom or the den to the studio whenever the light bulb switched on in his head. Judging from the virtuosity here, the lights were certainly on a great deal of the time in the Bruce Hornsby household. Most amazing, he makes it all sound easy. Parke Puterbaugh



THE JON SPENCER BLUES EXPLOSION Acme

(Matador/Capitol, 46 min)

Bellows Jon Spencer, "I do not play no blues! I play rock & roll." Well, he plays a little bit of everything: blues, rock, hip-hop, R&B, funk, punk, and whatever else the cat dragged in to this loose-as-a-goose getdown. What Spencer doesn't play is blues to suit the desiccated scholasticism of purists. Rather, he tears at it with a bawdy irreverence that taps into the juke-joint spirit, as if by drunken seance.

Spencer grew up as a wellheeled white New Englander, studying semiotics at Brown. As you might expect, given this background, *Acme* mixes tonguein-cheek heaving and panting with the genuine kick that comes from doing the dirty boogie in

"Magical Colors" (better Stones than the Stones have managed in ages) and in the self-referential, *Live at the Apollo*-esque namechecks that open and close the disc. You might be fuming, "How dare they?," but think back to a certain singer from the London School of Economics who likewise up-ended the blues-rock world with genuine reverence and nervy attitude. *Acme* oozes rhythm oil from its every sweat-filled pore. Roll over, Muddy Waters, tell Mick Jagger the news. *Parke Puterbaugh*

BOB CYLAN The Bootleg Series, Vol. 4: The "Royal Albert Hall" Concert, 1966 (Columbia, two CDs, 95 min)

B ob Dylan made a priceless comment when his long-bootlegged *Basement Tapes* were finally given official release in 1975: "I thought everybody already had them." That should go double for this famous 1966 tape, known for years as the

STAR SYSTEM					
Stellar	****				
Excellent	****				
Good	***				
Fair	**				
- Poor	*				

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SLEIGHERS

CELINE DION

These Are Special Times (550 Music)

SHAWN COLVIN Holiday Songs & Lullabies (Columbia)

CYNDI LAUPER Merry Christmas ... Have a Nice Life! (*Epic*)

ETTA JAMES Twelve Songs of Christmas (Private Music)

MARTINA McBRIDE White Christmas (RCA)

BABYFACE Christmas with Babyface (Epic)

KENNY LOGGINS December (Columbia)

BRIAN McKNIGHT Bethlehem (Motown)

VINCE GILL Breath of Heaven (MCA Nashville)

MEDWYN GOODALL A Christmas Tapesty

A Christmas Tapesty (New World; www.newworldmusic.com)

'NSYNC Home for Christmas (RCA)

BEACH BOYS Ultimate Christmas (Capitol)

SQUIRREL NUT ZIPPERS Christmas Caravan (Mammoth)

MANNHEIM STEAMROLLER

The Christmas Angel: A Family Story (*American Gramaphone*)

TRANS-SIBERIAN ORCHESTRA The Christmas Attic (Atlantic/Lava)

GEORGE SHEARING QUINTET Christmas (Telarc)

ENSEMBLE CHORAL DU BOUT DU MONDE Noëls Celtiques: Celtic Christmas Music from Brittany (Green Linnet)

CHRISTMAS JUG BAND

Rhythm on the Roof (Globe; www.globerecords.com) Dan Hicks and some Bay Area buddies.

A CHRISTMAS TO REMEMBER (Velvel) Michelle Malone, the Smithereens, Jill Sobule, others.

A HOLIDAY FEAST, VOLS. 1, 2, & 3

(Hungry for Music; www. hungryformusic.com) "Who Spiked the Egg Nog?," "Santa's Got a Mohawk," "I'm Broke Again This Christmas," and many more.

38 STEREO REVIEW DECEMBER 1998

A WINTER SOLSTICE REUNION

(Windham Hill) George Winston, William Ackerman, Alex DeGrassi, Nightnoise, others.

MERRY AXEMAS, VOL. 2: MORE GUITARS FOR CHRISTMAS

(*Epic*) Neal Schon, Zakk Wylde, Robin Trower, Al Di Meola, Ted Nugent, others.

NATTY AND NICE: A REGGAE CHRISTMAS

(*Rhino*) Lee "Scratch" Perry, Toots & the Maytals, Frankie Paul, others.

SONGS OF CHRISTMAS FROM THE ALAN LOMAX COLLECTION

(*Rounder*) Britain, Ireland, Italy, Spain, the Caribbean, and the southern U.S.

ULTIMATE CHRISTMAS

(Arista) From Eartha, Aretha, Carly, and Whitney to Bing, Boyz, Luther, and Luciano.

SANTA AND SATAN: ONE AND THE SAME?

(Dr. Dream/Mercury) No details at press time, but how can it be bad?

TO LIFE! SONGS OF CHANUKAH AND OTHER JEWISH CELEBRATIONS

(*Rhino*) Mandy Patinkin, Theodore Bikel, Nell Carter, others.

YULETIDE SOIRÉE PARTY PACK

(Rhino, two CDs) With recipes and coupons.

KAZOO CHRISTMAS

(CMH; P.O. Box 39439, Los Angeles, CA 90039) Celtic, Latin, surf. Kazoo included!

SWINGIN' BARNYARD CHRISTMAS

Cyndi Lauper 🔻

(*Oglio*) "Jingle Bells" as sung by cows, horses, pigs, chickens, sheep, ducks, cats, dogs, and monkeys (barnyard monkeys?).

R.E.M. Up

(Warner Bros., 65 min) ★★★↓

Drummers are often the first to go, and the rupture brought about by the departure of Bill Berry has, to be sure, altered R.E.M. That's because Berry wasn't just the drummer but a guitar-playing co-songwriter and an integral part of the band. Not only have the four shrunk to three, but the three are now scattered all over instead of being in each other's faces back home in Athens, Georgia, where it all began. *Up* was recorded in literally the four corners of the country: Seattle, San Francisco, New York, and Athens. Given all that, you may realistically fear that *Up* is transitional at best and disastrous at worst, but somehow R.E.M. has



Royal Albert Hall concert but actually recorded in Manchester ten nights earlier. It has probably sold more copies over time than many official Dylan albums; last year there was even a remastered bootleg CD edition. But the original boot was mono, and it is no surprise that Columbia has cleaner tapes. In fact, of the two CDs here, the acoustic disc sounds a little too digitally crisp, without the atmospheric room echoes that are virtually a part of the performance (the last verse of "Desolation Row," spliced in from a different tape than the rest of this set, has the warmer sound of the boot). The electric disc also sports a much different mix, with individual instruments, notably Garth Hudson's organ, emerging from the familiar wall of sound. But neither the altered sonics nor Tony

Glover's way too autobiographical liner notes affect the timeless nature of this music. The first disc is largely a warmup, but a haunting one: after getting the relatively light "She Belongs to Me" out of the way, Dylan plunges into the oblique nightmares of "Visions of Johanna" and "Desolation Row," both with an extra shot of foreboding. Even the tone of "Just Like a Woman," brand new at the time, shifts from anger to profound regret. When the Band shows up for the second disc, all hell breaks loose. Spurred on by an obviously hostile audience, Dylan unleashes a fury that he seldom summoned in the studio; suddenly he was playing punk rock. And the Band (with original drummer Mickey Jones) never got quite this ferocious again; witness Robbie Robertson's sputtering guitar breaks in "Leopard-Skin Pill-Box Hat." The finale, "Like a Rolling Stone," is introduced by the famous incident where a spectator yells "Judas" (Dylan's full response isn't printable here), and what follows is eight minutes of massive, near-violent crescendos. Arguably the most poetic temper tantrum ever recorded, this set is more than an essential piece of history: it may well be Bob Dylan's best album. Brett Milano



You Got Me Rocking - Gimme Shelter - Flip The Switch - Memory Motel - Corinna - Saint Of Me - Waiting On A Friend - Sister Morphine - Live With Me - Respectable - Thief In The Night - The Last Time - Out Of Control

ROLLING STONES NO SECURITY

Live from The Bridges To Babylon World Tour

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t rock?

stars awarded

A Guide to Hard Rockers

by Ken Richardson

Manufacturer	Model	Does	Does	No. of	Comments
KING'S X	Tape Head (Metal Blade)	Yes	Yes	****	Comeback complete. Pop-metal crown is theirs agair.
LOCAL H	Pack Up the Cats (Island)	Yes	Yes	****	Rock & roll! Guitar, drums, and Roy Thomas Baker.
GALACTIC COWBOYS	At the End of the Day (Metal Blade)	Yes	Yes	****	Another comeback complete. Long, winding metal.
THE OFFSPRING	Americana (Columbia)	Yes	Yes	****	Tunes and tirades. Riffs, riffs, riffs. Fun, fun, fun.
DLR BAND	DLR Band (Wawazat!!/Touchwood)	Yes	Yes	****	That's David Lee Roth. Beats the Cherone out of VH3
KISS	Psycho-Circus (Mercury)	Yes	Yes	****	Yet another comeback complete. Anthems galore.
AEROSMITH	A Little South of Sanity (Geffen, two live CDs)	Yes	Yes	****	Spry, tough, well-recorded and youthful.
BLACK SABBATH	Reunion (Epic, two live CDs)	Yes	Yes	****	Long live Bill Ward! Deep set-list. 2 so-so studio cuts
THE DONNAS	American Teenage Rock 'n' Roll Machine (Lookout!)	Yes	Yes	****	Long live the Runaways! "You Make Me Hot" indeed.
THE LIVING END	It's for Your Own Good/Hellbound (Reprise, two CDs)	Yes	Yes	****	Infectious power-punk/pop/ska/rockabilly via Australia.
EVE 6	Eve 6 (RCA)	Yes	No	***	Solid, but not enough sweat.
LESS THAN JAKE	Hello Rockview (Capitol)	Yes	No	***	Do you like Green Day and horns? Gets samey.
MONSTER MAGNET	Powertrip (A&M)	Yes	No	***	A trip, yes, but could use more power.
MARILYN MANSON	Mechanical Animals (Nothing/Interscope)	Yes	No	***	Killer: "New Model No. 15." The rest: refried Bowie.
SYSTEM OF A DOWN	System of a Down (American)	Yes	No	***	Thrash with whimsy. More amusing than Slayer.
KID ROCK	Devil Without a Cause (Lava/Atlantic)	Yes	No	***	Lewd and crude but surprisingly okay.
FEAR FACTORY	Obsolete (Roadrunner)	Yes	No	**	Vomit vocals over laser riffing.
JUDAS PRIEST	'98 Live: Meltdown (CMC, two live CDs)	Yes	No	**	Halford + Gillan = Ripper. Ripper + Priest = cartoon.
MUDHONEY RUSH	Tomorrow Hit Today (Reprise)	No	No	**	Grunge, mostly grounded.
RUSH	Different Stages (Atlantic, three live CDs)	No	No	**	Great band, but 4th multiple live set is 3 too many.
KORN	Follow the Leader (Immortal/Epic)	No	No	**	"Dead bodies everywhere." Korn needs a laxative.
STUTTERING JOHN	Everybody's Normal but Me (Razor & Tie) *	No	No	**	We don't need no stinkin' ballads. Or stinkin' rockers.
SLAYER	Diabolus in Musjca (American)	No	No	**	Music to Test Radar Guns By.
DRAIN S.T.H.	Horror Wrestling (The Enclave/Mercury)	No	No!	*	Swedish gals. Strictly cheese. Come home, ABBA!
CANDLEBOX	Happy Pills (Maverick/Warner Bros.)	No	No!	*	Getting mighty serious and bland.
BRIAN MAY	Another World (Hollywood)	No	No!	¥	Comedown complete. Can't write, barely plays.
	Hellbilly Deluxe (Geffen)	No	No!	*	"Superbeast," "Dragula," "Living Dead Girl," zzzzz.
NASHVILLE PUSSY	Let Them Eat P (The Enclave/Mercury)	No	No!	*	So bad it's still bad!
VANILLA ICE	Hard to Swallow (Republic/Universal)	Noo	0000!	0	Ice goes metal. Don't ask, don't buy.
LONDON PHILHARMONIC ORCHESTRA	Symphony of Destruction (Music Club)	Aaa	argh!	0	"Punk goes classical." It's the end of the world.

turned adversity into advantage with a 15song disc that returns the band to the studio-crafted introspection of Out of Time and Automatic for the People.

Overall, the album is subdued and melancholy, with themes generally about the robotization of mankind in a technological world (echoes of Radiohead) and particularly about what seems to be the dissolution of a relationship. The most arresting aspect is Michael Stipe's lyrical openness; he has

never been more nakedly self-revelatory, nor has he enunciated his lyrics with such deliberate precision (the opening "Airport Man" excepted). The roles of jilted romantic and public confessor are new to him, and he is drolly frank about his discomfiture in "Sad Professor": "If we're talking about love then, dear readers, I have to tell you I don't know where I'm headed."

Reunited:

Black Sabbath

Although Up may seem like Stipe's album, Peter Buck and Mike Mills are responsible for its ambient canvas, which ranges from soundscapes deliberately evocative of Brian Wilson ("Suspicion," "Parakeet") to quieter, more impressionistic backdrops ("The Apologist," "Diminished"). Despite its title, this album is no more up than U2's last album was pop. What it may signify is that, having reached an emotional bottoming out, there's nowhere else to go. Such obscure positivity is perfectly in keeping with the spirit of R.E.M., who have acquitted themselves with resurgent artistry.

Parke Puterbaugh

JOHN MELLENCAMP

(Columbia, 46 min) $\star \star \star \star$

A fter deciding to "go someplace else" on his last album, 1996's sample-littered *Mr. Happy-Go-Lucky*, the blue-collar bard of Bloomington returns with a mostly roots-rocking work that should, at the very least, draw a sigh of relief from longtime fans. At the very most, though, *John Mellencamp* is an older-and-wiser successor to such '80s high-water marks as *Uh-Huh*, *Scarecrow*, and *The Lonesome Jubilee*, filled with the kind of infectious songs that made Mellencamp a star in the first place.

He gets the usual brownie points for grappling with humanity's big issues in the Cain-and-Abel "Fruit Trader" and the destiny-is-in-vour-hands "Your Life Is Now" and "It All Comes True." But the nonstatements carry the day. That Mellencamp still draws sustenance from the Beggars Banquet table is clear in frisky fare like "Where the World Began," "Miss Missy," and, most notably, the clench-chorused "Chance Meeting at the Tarantula." Marred somewhat by three stabs at R&B that close the album with diminishing returns, John Mel*lencamp* is nonetheless this trouper's best effort in over a decade. Billy Altman

ELVIS COSTELLO WITH BURT

BACHARACH Painted from Memory (*Mercury*, 52 min)

* 1 ike Elvis Costello's collaborations with Paul McCartney and the Brodsky Quartet, Painted from Memory sounds better on paper than it does on disc. It was obviously conceived as a pop album in the classic sense, a lost-love cycle in the vein of Frank Sinatra's Only the Lonely, but it lacks the essential elements of classic pop: memorable tunes and heart. Burt Bacharach's '60s breeziness is echoed only in a few stray melodic bits, which may well be Costello's doing; the rest is resoundingly unhummable. Costello's lyrics hammer away at the same dark angle - heartbreak in an empty house, heartbreak at a birthday party, heartbreak in Toledo. And the arrangements hang ornate bits on songs that call for directness, an example being the falsetto chorus and weighty bridge applied to "God Give Me Strength." Worse, the stilted vo-

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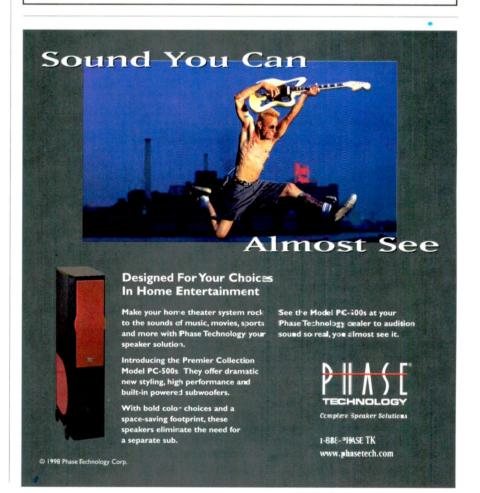
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popmusic

QUICK FIXES

ELLIOTT SMITH XO

(Dreamworks, 45 min) * * * *

Smith's pop fairly gushes from the speakers with its tuneful urgency and uppertimbre vocals. Decades back, you'd hear this kind of thing from the Left Banke and Emitt Rhodes; today (more rarely), from the likes of Richard X. Heyman. In "Tomorrow Tomorrow," Smith's guitar recalls a harpsichord, furthering the baroque aura that perfumes this disc. *P.P.*

KEITH JARRETT Tokyo '96

(ECM, 79 min) * * *

This trio set with bassist Gary Peacock and drummer Jack DeJohnette features a good choice of pop and jazz standards (and a rarely covered Bud Powell song called "John's Abbey"), enough impressionistic soloing to keep you in a near dream state for weeks, and (sigh) a bunch of weird noises from the pianist on the energetic cuts. *Richard C. Walls*



TINY TOWN (Pioneer Music Group, 57 min) ★ ★ ★ ★ SHAVER Victory

(New West, 37 min) * * *

Upping the roots-rock ante, the members of Tiny Town stretch themselves as writers, singers, and players. That's not surprising, since they include two ex-Subdudes (bassist Johnny Ray Allen, guitarist Tommy Malone). With Tiny Town in the house, every night can be Saturday night. Speaking of which, Billy Joe Shaver is a rootsy country-rocker who has eschewed Saturday-night temptations for Sunday-morning salvation on Victory, an acoustic country-gospel album made with his guitar-playing son Eddy. It's quietly driven by a faith-filled undercurrent of joy. P.P.

MONTY HOLMES All I Ever Wanted (Bang II, 43 min) * * * *

A writer of hits for George Strait and Lee Ann Womack, Holmes turns out to be a resonant seller of his own songs, working in the honky-tonk mode of George Jones ("Basic Goodbye"), Vince Gill ("What I Do the Best"), and Merle Haggard ("Leave My Mama Out of This"). He's as mainstream as it gets, but he's got a bigger love for music than for the mechanics of fame. A.N.

KATE & ANNA McGARRIGLE The McGarrigle Hour

(Hannibal/Rykodisc, 68 min) * * *

The McGarrigles gather family members and friends for this parlor-song session, which ranges from new renditions of favorites ("Mendocino," "NACL," "Cool River") to classics by Stephen Foster, Cole Porter, and Jesse Winchester. Loudon Wainwright III shows up to join Rufus and Martha Wainwright, his offspring with Kate, and the grown kids promise to be as humorous and dark as their parents. But, in the end, it's still Kate and Anna who captivate with their shimmering high sopranos. *A.N.*

THE KENNEDYS Angel Fire

(Philo, 44 min) * * * *

On their third album, Pete and Maura Kennedy strike a fine balance between jangly pop-rock and reflective, acoustic folk-pop. They may be well-read, but nowhere are they more effective than in a spooky and mystical version of "The Coo Coo," a song that's literally as old as the hills. A.N.

LOS SUPER SEVEN (RCA, 41 min) ★ ★ ★ KAMBARA MUSIC IN NATIVE TONGUES

(Water Lily Acoustics, 42 min) ★ ★ Los Super Seven are David Hidalgo and Cesar Rosas of Los Lobos, Joe Ely, Freddy Fender, Flaco Jimenez, Rick Treviño, and Ruben Ramos, and they're in laidback mode for this tasteful Tejano session, which could use a little less balladry and a little more of guest star Doug Sahm. Meanwhile, Hidalgo and Martin Simpson are the frontmen on the Kambara Music set, a New Agey blend of Latin and East Indian chamber music; the two long instrumentals are fine, but the listless covers of Richard Thompson and Merle Haggard don't translate. B.M.

DAVE FRISHBERG By Himself

(Arbors Jazz, 59 min) * * * 1

The pianist comfortably recalls Earl Hines and Johnny Guarnieri with a dash of Joe Sullivan, demonstrated best in "Ain't She Sweet?" He takes a more personal approach in "Last Night When We Were Young," which becomes remarkably introspective. This is a delightful set. *C.A.* cals that turned up on the semiclassical *Juliet Letters* make a return here; the understatement of Costello's earlier ballads is long gone. Save for 1994's underrated *Brutal Youth*, this continues to be a frustrating decade for Elvis fans. *Brett Milano*

THE GOO GOO DOLLS Dizzy Up the Girl

(Warner Bros., 45 min) ★ ↓

ike Soul Asylum in recent years, the Goo Goo Dolls have dedicated their career to capturing what the Replacements would have sounded like if they'd written soundtrack rock. The Goos recently scored their soundtrack hit with "Iris" from City of Angels (included here), a radio-ready mix of teen angst and hokey sentiment ("I'd give up forever to touch you" - yeah, right). The rest of Dizzy Up the Girl is theoretically more rocking, but it stops well short of any real sweat or passion (hard to believe this was once a half-decent punk/ pop band). There's enough craftsmanship involved to make it go down smoothly, with legit types like Tommy Keene and R.E.M. sideman Nathan December making unspecified contributions. Bottom line: it's all as well-produced as a random Melrose Place episode, and ultimately as memorable.

Brett Milano

DR. JOHN Anutha Zone

(Pointblank/Virgin, 57 min) ★★★★

ou may well ask why Dr. John bothered to record with a bunch of trendy English names - including Paul Weller and members of Portishead, Spiritualized, and Primal Scream - when he's got so many great players at home in New Orleans. The guests will get him noticed again, but there's more than crass crossover going on here. In fact, the players don't take over the sessions; they only encourage Mac Rebennack to stir up the old funk and fire. After a string of traditional-sounding albums, it's good to hear him experimenting with arrangements and making full use of the studio again before winding up with an oldtime street party, "Sweet Home New Orleans." A revisit to trademark sounds with a new sense of purpose, Anutha Zone is one of the peak albums in the Doctor's career. Brett Milano

LYLE LOVETT Step Inside This House

(Curb/MCA, two CDs, 80 min) $\bigstar \bigstar \bigstar \bigstar$

Lyle Lovett had help forging his quirky, transcendent hybrid of folk, blues, and jazz, and on *Step Inside This House* he wants to come clean about it, paying tribute to the Texas artists and songwriters who most influenced him along the way. Anyone familiar with Lovett's roots won't be surprised to find him covering four songs each from Townes Van Zandt and Walter Hyatt; he also draws on the catalogs of Guy Clark, Michael Martin Murphey, and Robert Earl Keen, among others. And while he makes these songs his own in the way he hangs his elegant raiments on what usually started out as skeletal folk, he's also nakedly truthful about just whose knee he sat at to learn his songwriting craft.

Willis Alan Ramsey's "Sleepwalking," for example, matches an ironic, whimsical lyric with a cool jazz-blues. And Eric Tavlor's "Memphis Midnight/Memphis Morning" sets a heartbreaking lyric of romantic hunger to the kind of blues that comes less from tradition than from a hole in the soul; its pinpoint writing is all about getting the feeling in the grooves, a hallmark of Lovett's own work. The album lingers a little too long on the dark and dreaded, but what could easily have been a quickie salute to the Texas School of Songwriting is instead a compelling addition to Lyle Lovett's already singular canon. Alanna Nash

JAZZ

JOHN COLTRANE Settin' the Pace (JVC, 41 min)

★ ★ ★ ★ Ballads (Mobile Fidelity Sound Lab, 32 min) ★ ★ ★ ★

wo albums by the legendary saxophonist are given the audiophile treatment, *Settin' the Pace* on a JVC Extended Resolution XRCD2 and *Ballads* on a Mobile Fidelity Ultradisc II. Both original albums were recorded by Rudy Van Gelder but under very different conditions, so a strict technical comparison may not be entirely fair. *Settin' the Pace* was made for Prestige in 1958 in Van Gelder's Hackensack apartment, whereas *Ballads* was done for Impulse! in 1962 in his Englewood Cliffs studio. No contest, right?

Wrong! Each reissue does improve on the sound of the original recording. But the apartment tapes of Pace had a presence that the studio tapes of Ballads lacked, a presence that was evident on vinyl issues of the Pace LP. In getting that aura across, JVC's XRCD2 represents a more noticeable improvement over previous releases than does MoFi's Ultradisc II, which all too clearly separates John Coltrane's tenor in the left channel from Elvin Jones's drums in the right and places piano and bass squarely in the middle. Of course, Pace is also a more cohesive performance, with Coltrane superbly supported by pianist Red Garland, bassist Paul Chambers, and drummer Art Taylor. Then again, Ballads features what some have called Coltrane's ideal quartet: pianist McCoy Tyner, bassist Jimmy Garrison, and Jones. Chris Albertson

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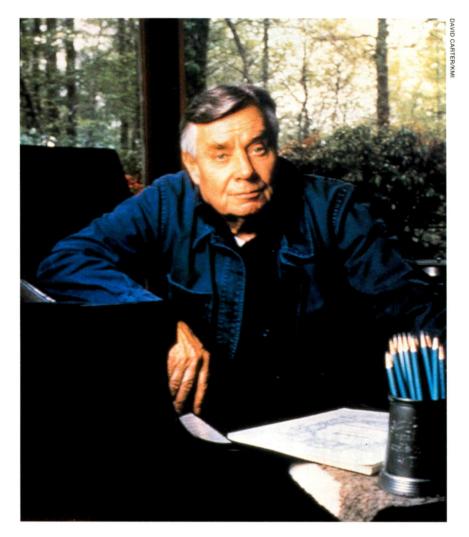
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BEST OF THE MONTH Robert Shaw Conducts Modern Choral Masterworks

eerless choral director Robert Shaw has put together what for me amounts to a dream program on a new Telarc disc (CD-80479) of works by Bela Bartok, Ralph Vaughan Williams, and Samuel Barber. Adding up to 71 minutes, they rank among the most powerful choral compositions of the 20th cen-

Williams, and Samuel Barber. Adding up to 71 minutes, they rank among the most powerful choral compositions of the 20th century, and they receive top-drawer performances from the Atlanta Symphony Chorus and Orchestra.

Barber's *Prayers of Kierkegaard*, set to deeply moving texts by the influential 19thcentury Danish philosopher-theologian, begins as quasi-Gregorian chant and moves into a choral evocation of the infinitely loving and caring deity, then to a soprano solo on the suffering Christ as redeemer. Chorus and soloists together then turn to the problems of human longing and frailty, underlined by impassioned utterances from the full orchestra. The work ends with a plea for forgiveness, cast as free chorale: "hold not our sins against us, but hold us up against our sins."

Bartok's *Cantata profana*, built on a pre-Christian Romanian legend of a father whose nine sons are transformed into giant stags, alternates between magical nature evocation and fiercely dense contrapuntal textures encompassing scenes of action and emotional stress. Shaw's own English-language version is used, and it helps significantly in conveying the meaning. Both performance and sound are a great improvement over the late Georg Solti's Hungarianproduced recording, his last for London Records.

The Vaughan Williams cantata *Dona nobis pacem*, a product of the years immediately preceding World War II, sets several poems by Walt Whitman as well as texts from the Bible and other sources. There are powerful moments here, underlined by the soprano's recurrent plea, "*Dona nobis pacem*" ("Give us peace"). Shaw's version stands up handsomely compared with the best previous recordings.

Over and above the programming none of these superb works is exactly overexposed! — and the pleasure of hearing the full chorus, the soloists deserve special mention: soprano Carmen Pelton in the Barber and Vaughan Williams, tenor Richard Clement at the anguished close of the Bartok, and, above all, baritone Nathan Gunn, whose contributions in both the Bartok and the Vaughan Williams are of surpassing eloquence. Telarc's full-bodied sound is tops throughout. David Hall

BACH Sonatas and Partitas for Unaccompanied Violin

Paul Galbraith, guitar (Delos 3232, two CDs, 118 min)

The British guitarist Paul Galbraith has made something of a sensation in the guitar world by creating (with luthier David Rubio) an eight-string classical guitar on which he can play all six of Bach's solo-violin sonatas and partitas without pausing to retune. This is not only a matter of extra strings; he also transposes all of the sonatas and one of the partitas up a step, putting everything in related sharp keys - for example, the famous D Minor Chaconne is now in E Minor. All of this, plus some dazzling technique, enables Galbraith to give flawless performances of this music, making it sound as though it was originally conceived for his instrument. This is not just a technical or virtuoso trick but is connected with the guitarist's notion that the entire set is one large piece of music - inspired, he argues, by the life and passion of Jesus.

Transcribed Bach solo-violin pieces as mystical program music? Whether you

STAR S	YSTEM
Stellar	****
Excellent	****
Good	***
Fair	**
Poor	*

agree with that or not, there is no question that the result is a set of extraordinarily skillful, coherent, and (the right word here)



passionate performances. Gone is the sense of struggle that has permeated this music for generations, and some listeners may miss the struggle. But without it, Galbraith can concentrate on musical content and expression. The plain truth is that these readings are more unified and more technically proficient than anything I've ever heard from a violinist! And they certainly make sensational guitar music with a remarkable depth of feeling. Eric Salzman

BARTOK Bluebeard's Castle

Norman, Polgar; Chicago Symphony, Pierre Boulez cond. (Deutsche Grammophon 447 040, 58 min)

In Bartok's only opera, the vocal writing is inseparably linked to the *parlando* rhythms of Bela Balazs's poetic text. An ideal performance would require two outstanding native singers and a Hungarian conductor immersed in the elusive Magyar speech rhythms. One of those requirements is met here in the person of Laszlo Polgar, who in many respects gives us an ideal Bluebeard: brooding and world-weary, projecting a suffering rather than a menacing aura. His basso tones are occasionally strained by the highest passages of the role, but he delivers every note with conviction.

Total conviction is lacking in Jessye Norman's Judith, however, even though her lush, dark-tinged soprano is well suited to the part and she was well enough coached to deliver her lines intelligibly. Her interpretation fails to convey the mystery and foreboding in the early scenes, and later she takes on a severe and at times menacing tone that allows for little nuance or textual illumination.

Pierre Boulez gives us a brilliant account of Bartok's dazzling music in which no detail is overlooked. In the famous fortissimo outburst of the "Fifth Door" episode, Norman's high C is nearly lost in the orchestral torrents, but the overall effect is nonetheless stunning. This may be the most briskly paced Bluebeard in the catalog, which is not necessarily beneficial. The Chicago Symphony never flags, but there are moments that call for a broader pacing and a sense of repose. In the leadup to the opening of the Seventh Door (Cue 11), for instance, the frantic pace prevents Norman from properly articulating her lines. The spoken Prologue, omitted in several recordings, is eloquently delivered here by Nicholas Simon. The annotation is exemplary.

George Jellinek

GERSHWIN Standards & Gems

Judy Blazer, David Garrison, Dawn Upshaw, John Pizzarelli, others; Eric Stern and John Mauceri cond. (*Nonesuch 79498, 59 min*)

Predictably, the Gershwin centennial year has brought forth a deluge of repackaged recordings; this is one of the best. As the title suggests, the collection includes some of the composer's best-known songs, such as a playful, finger-popping "Fascinating Rhythm," sung by John Pizzarelli (backed by Ann Morrison and Lara Teeter), and lesser-known items that brim over with wit and melody, such as "My Cousin in Milwaukee," performed here with sassy, brassy style by Arnetia Walker. Three of the tracks are new recordings, and they're among the best, including a sweet, fresh performance of "Somebody Loves Me" by Judy Blazer and "I Don't Think I'll Fall in Love Today," in which Dawn Upshaw and David Garrison flirt with each other but find they can't agree on anything. If you're in the tragic position of having no Gershwin in your collection, you couldn't find a better disc to fill the gap. Jamie James

KORNGOLD Symphony in F-sharp; The Sea Hawk (excerpts)

Oregon Symphony, James DePreist cond. (Delos DE 3234, 62 min)

he first glimmerings of Korngold's Symphony in F-sharp were put to paper as early as 1919, but it wasn't finished until 1952, by which time he had given up writing film scores to devote himself to composing for the concert hall. Dedicated to the memory of President Franklin Delano Roosevelt, the symphony is a full-blown post-Romantic affair. The elaborate opening movement teems with dramatic menace, the scherzø is richly fanciful, the dark-hued adagio - the finest movement - is a plangent lamentation, and the spirited finale features brilliant polyphonic writing. James DePreist and his Oregonians turn in a firstclass performance and have the benefit of top-of-the-line recording from engineer John Eargle. By way of prologue, Delos has

A Century of Great Pianists

AS RECORDING CAME INTO ITS OWN this century, various record labels formed very successful relationships with a great array of pianists. Philips Classics, in partnership with Steinway & Sons, is celebrating that association with *Great Pianists of the 20th Century*, a 200-CD series that it says is the largest project ever undertaken by a record company. Perhaps its most extraordinary aspect, however, is how many labels that are normally competitors — including EMI,



BMG, Deutsche Grammophon, Decca, Sony, Vanguard, and Teldec — have collaborated to make the series possible. The first twenty of the planned hundred two-CD sets of 74 planists were released in October and November. Among the artists represented are



Martha Argerich, Claudio Arrau, Wilhelm Backhaus, Alfred Brendel, Emil Gilels, Clara Haskil, Vladimir Horowitz, Wilhelm Kemp f, Alicia de Larrocha, Dinu Lipatti, Murray Perahia, Maurizio Pollini, Sergei Rachmaninoff, Sviatoslav Richter, and Artur Rubinstein. Ten new sets will be released each month until September 1999. All sets will be midprice. Robert Ripps



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thrown in 8 minutes from Korngold's classic score for the Errol Flynn swashbuckler *The Sea Hawk.* David Hall

MENDELSSOHN Piano Works

Irina Mejoueva (*Denon 18039, 61 min*) ★★★★

rina Mejoueva, a 23-year-old Russian, makes a favorable impression in this program, recorded two years ago, which covers virtually all the old Mendelssohn favorites. There is not a hint of condescension, nor of overinterpretation. She seems to revel in happy discovery at every point, and to be well content to take him on his own terms.

The fugue in the splendid Prelude and Fugue in E Minor (Op. 35, No. 1) is initiated very deliberately, not by way of monumentalizing it but simply by allowing the momentum to gather and build with apparent effortlessness. The Variations sérieuses and the Fantasy in F-sharp Minor are showpieces of the most elegant sort because Mendelssohn invested them with substance as well as virtuosity. Mejoueva achieves an ideal balance of these elements without sacrificing an iota of the spontaneity that must propel them if they are to be successful on any level. The "elfin" character in the Scherzo à capriccio and the once ubiquitous Rondo capriccioso emerges with particular brightness, utterly free of gratuitous

enhancement. An enhancement not at all gratuitous is Denon's well-focused reproduction of the piano sound. *Richard Freed*

NYMAN Quartets

Camilli Quartet; Michael Nyman Band (EMI 56574, 56 min)

*** The soundtracks Michael 1.3. for Peter Greenaway's films made the composer a well-known name, but it was his soundtrack to Jane Campion's The Piano that made him an international phenomenon. He also continues to write abstract instrumental music, such as the 41minute String Quartet No. 4 on this CD. Cast in 12 brief and discontinuous movements, it is the virtual antithesis of the 18thcentury Classical string quartet, but it's not any closer to what we think of as "minimalism." In a kind of post-minimalism, Nyman takes conventional Western materials and subjects them to so much repetition that they lose their traditional musical functions. Nyman's sustained, neo-Romantic lyricism finds parallels in recent works by Philip Glass, and the folkish modality of the slow movements is perilously close to Vaughan Williams. More successful are the motivically based fast movements, throbbing with Bartokian rhythmic energy and metric disruption. The Camilli Quartet displays patches of sour intonation and rough ensemble but a limitless amount of energy.

The companion piece is titled 3 Quartets, which refers to a string quartet, a saxophone quartet, and a brass quartet. Here the biting, nasty wind and brass writing echo the Dutch minimalist Louis Andriessen, although without his sturdy spine. Pompous chorales and fanfares are meant to conclude 3 Quartets with grandiosity, but they fall flat (as in Glass) because the repetition of Western clichés cannot support Nyman's heroic aspirations. K. Robert Schwarz

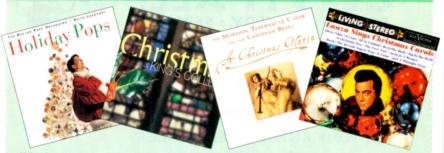
PÄRT Kanon pokajanen

Estonian Philharmonic Chamber Choir, Tonu Kaljuste cond. (ECM 1654/55, two CDs, 83 min)

The Estonian mystic Arvo Pärt's *Kanon* pokajanen ("Canon of Repentance"), commissioned for the 750th anniversary of Cologne Cathedral, harks back to the eighth century, when St. Andrew of Crete composed a body of prayers that lie at the very root of the Byzantine, Greek, and Russian Orthodox liturgy. It is sung unaccompanied here by a remarkable Estonian chorus, and throughout the long time span the 28 voices sustain a beauty of tone, accurate intonation, and subtle dynamics that left me almost breathless. This is not concert music



Christmas Medley



Whether sung by a tenor or a choir large or small, or played by a pops orchestra from Boston or Vienna, it's beginning to sound a lot like Christmas.

BOSTON POPS ORCHESTRA Holiday Pops

(*RCA Victor 63252*) Conductor Keith Lockhart and the orchestra are joined by the Tanglewood Festival Chorus in popular holiday songs and seasonal music by Bizet, Berlioz, and Vaughan Williams.

CHOIR OF KING'S COLLEGE, CAMBRIDGE

Christmas at King's College

(*EMI 66245*) A four-CD compilation of the choir's holiday recordings from 1965-1981.

PLACIDO DOMINGO WITH SARAH BRIGHTMAN, HELMUT LOTTI, AND RICCARDO COCCIANTE A Gala Christmas in Vienna

(Sony 60396) On this souvenir of Domingo's

annual visit to Austria, he's joined by pop singers from England, Belgium, and Italy, all accompanied by the Vienna Symphony.

MARIO LANZA

Lanza Sings Christmas Carols

(RCA Victor 63178) The famous American tenor's 1959 "Living Stereo" recording, digitally remastered using 20-bit technology.

but a true liturgical work, and a masterpiece of its kind possibly matched only by Rachmaninoff's *Vespers*.

The Canon is a morning ritual that evokes the division between the human and the divine. As sung here in Church Slavonic, it consists of nine odes, or canticles. Midway, between Odes VI and VII, come two brief hymns, *Kontakion* and *Ekos*, after which the musical atmosphere brightens ever so subtly. The liturgy ends with an ethereal "Prayer After the Canon." The culminating and most profoundly moving part of the score, it exemplifies Pärt's miraculous way of achieving maximum effect through the simplest of means — juxtaposition of triads, modalities, and harmonic shifts that creep up on you rather than storming the

MALLE BABBE WOMEN'S CHOIR Sing, Choirs of Angels

(Sony 60660) Songs about the Virgin Mary and Christmas ranging from the 14th century (anonymous) to the 20th century (Holst) performed by an unaccompanied Dutch choir.

MORMON TABERNACLE CHOIR A Christmas Gloria

(*BWE 0196*) The mighty choir is joined by the Canadian Brass for their latest Christmas offering. (BWE Classics, 55 N. 300 W., Suite 315, Salt Lake City, UT 84110-1160; 800-654-1686; www.bwwe.com)

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(*Delos DE 3238*) Traditional carols and songs along with seasonally inspired selections by Bach, Brahms, Rachmaninoff, and Ives.

THEATRE OF VOICES

Carols from the Old and New Worlds, Vol. 2

(Harmonia Mundi 907233) Paul Hillier directs the Pro Arte Singers and Indiana University Children's Chamber Choir in early English and American carols.

emotional ramparts. The predominantly low-key dynamic scheme demands total concentration. The ambience of the Niguliste Church in Tallinn contains the music with utter clarity. David Hall

SCHNITTKE Complete String Quartets

Kronos Quartet (Nonesuch 79500, two CDs, 56 min)

**** A lfred Schnittke's four string quartets, written between 1966 and 1989, trace his path from modernist to postmodernist. The First Quartet is serialist, an act of defiance in a country where the Western avantgarde was banned. Written 14 years later, the Second Quartet is more rhapsodic and intuitive, and quotations from a few old

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Russian chorales appear in twisted, dissonant distortions. The Fourth Quartet seems like a summation, as if a life's work were being assembled for one last time, and so its polystylism is more extreme - but tinged with resignation.

Say what you will about the Kronos Quartet, but there is no other ensemble in America today that could present these works with greater commitment and intensity. Everything from the thorny serial complexity of the First Quartet to the ineffable sadness of the Fourth is conveyed with lean-textured clarity, interpretive acumen, and frightening passion. K. Robert Schwarz

SCHUBERT-LISZT

Song Transcriptions

Frederic Chiu, piano (Harmonia Mundi 907239, 63 min)

iszt wrote volumes of virtuoso transcriptions for piano, yet nowhere did he find greater inspiration than in the songs of Schubert. Their constantly shifting moods and brilliant coloration were ideally suited to his hypersensitive artistic temperament. Although he transcribed dozens of individual lieder, the Schwanengesang is the only cycle he set in its entirety. So thoroughly did Liszt enter imaginatively into the musical worlds of these songs, seamlessly interweaving the voice and piano parts, that it never occurs to the listener to miss the singer. In masterly arrangements such as that for the beloved "Ständchen" ("Serenade"), the theme progresses through a three-octave range, concluding with a conversation between the two hands, the same lines gracefully passing between them an octave apart. Even more than in most of Liszt's piano

works, the Schubert transcriptions require a

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classicalmusic

sympathetic conducting, with its emphasis on directness and simplicity. An equal emphasis on each collaborator's role in the finale brings with it a bit of reining in of the more passionate side of Schumann's character, giving the music an unexpected but largely persuasive lilt and inwardness in place of the fiery spontaneity implicit in the design of the energetic theme.

If the concerto performance is "different" in ways that may make it appealing, the Fantasy in C is given a reading in which passion seems to have been banished altogether, with unconvincing results. The flame burns very low here, suggesting something more in the way of a meditation or reminiscence than a full-scale realization of an essentially dramatic work. Brendel's earlier recordings of the fantasy on Philips and Vanguard sound more committed as well as more animated. But both works here are vividly recorded. *Richard Freed*



COLLECTIONS

MARCELO ALVAREZ

Bel Canto

Welsh National Opera Chorus and Orchestra, Carlo Rizzi cond. (Sony 60721, 66 min)

n his debut album of *bel canto* arias, the Argentinian tenor Marcelo Alvarez displays a meltingly rich voice that rings with pure gold. His technique is sure, with superb breath control and a precise mastery of dynamics. Best of all, he is an eloquent communicator. His Duke in the selections from Verdi's *Rigoletto* progresses from brash insouciance ("Questa o quella") to sorrowful lament ("*Parmi veder le lagrime*") to rueful exasperation ("*La donna è mobile*").

The selections from Bellini and Donizetti offer some familiar tunes, including a hauntingly introspective "Una furtiva lagrima," from L'elisir d'amore, and showy arias from lesser-known operas. A final point: to my ears, Alvarez's diction is impeccably idiomatic, no doubt because Argentina has a sizable Italian immigrant population. Hearing this disc, if you didn't know it was Señor Alvarez singing, you'd think it was Signore. Jamie James

TANGO ROMANCE

Music of Buenos Aires

Pablo Ziegler, piano; Horacio Hurtado, bass; Walter Castro, bandoneón; Orpheus Chamber Orchestra (*RCA Victor 63233, 62 min*)

Pablo Ziegler was Astor Piazzolla's pianist for ten years, and this CD solidifies his claim to be the outstanding representative of the nuevo tango in his generation. Appropriately, he includes some Piazzolla, but less familiar pieces: a wonderful suite from a score for the choreographer Oscar Araiz, music for a stage piece called Tango del ángel, and the intense Oblivion, composed for a Bertolucci film. The pianist also reaches back for two pieces by Juan Carlos Cobián, one of the great tangueros of an earlier generation. But the centerpiece is Ziegler's own Buenos Aires suite for piano and orchestra, an evocative, concerto-like tribute to the tango's native town. There's also his charming, wistful, and original Milonga en el viento ("Milonga in the wind").

The differences between Ziegler and Piazzolla are attributable to the difference between a pianist and a *bandeonista*. Everything here is composed, arranged, or adapted by Ziegler for solo piano or tango trio (piano, bass, and bandoneón) with orchestra. Solo keyboard takes the lead much of the time, and the traditional solo violins become a whole string section. But the true tango feel — that unsentimental, passionate romance of infinite nostalgia that is the tango trademark — is never missing. *Eric Salzman* Whether you look at the competition in consumer electronics as a game or a war, the object is still to win. And if you want a competitive edge, you'll get it at the Consumer Electronics Show, the world's largest and most comprehensive consumer technology event.

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EQUIPMENT TEST REPORTS

Amplifiers and Preamplifiers

Adcom GFA-7500 (five-channel power), Jul. 58 ATI AT1505 (power), May 40 AudioSource PreAmp/Tuner Two (preamp/tuner),

Feb. 32 Classé CAV-75 (five-channel power), Jul. 58

Harman Kardon Model 2.1 (five-channel power), Jul. 58

Parasound HCA-1205A (power), Mar. 58 Sherwood Newcastle AM-9080 (power) and AVP-9080R (preamp/tuner), Oct. 42

Sunfire Cinema Grand (five-channel power), Jul. 58 Yamaha DSP-A1 (DD/DTS integrated amp/surround processor), Jun. 43



CD/DVD Players

Adcom GCD-750 (ČD), Jan. 40 JVC XU-301 (CD changer/MD recorder), Oct. 33; XV-D2000 (DVD/CD), Apr. 37 Marantz DR-700 (CD-R/RW recorder), Dec. 38

Mitsubishi DD-2000 (DVD/CD), Oct. 68

NAD Model 522 (CD), Jul. 46

Panasonic DVD-A310 (DVD/CD), Jun. 48; DVD-L10 (portable DVD), Jul. 51

Philips CDR 870 (CD-R/RW recorder), Jan. 33; CDR 765 (CD dubbing recorder), Oct. 64 Philips Magnavox DVD815AT (DVD/CD), Oct. 68

Pioneer DV-505 (DVD/CD), May 29; Elite DV-09 (DVD/CD), Aug. 33 RCA RC5510P (DVD/CD), Oct. 68

RCA RC5510P (DVD/CD), Oct. 68 Sony DVP-S300 (DVD/CD), Jun. 60 Technics SL-MC410 (CD changer), Mar. 44 Toshiba SD-3107 (DVD/CD), Jan. 48 Zenith/Inteq DVX2100 (Divx/DVD), Sep. 43

Disc and Tape Recorders Denon DMD-1000 (MD), Jul. 33

Denon DMD-1000 (MD), Jul. 33 JVC XU-301 (CD changer/MD recorder), Oct. 33

Kenwood 1050MD (MD), Jun. 66 Marantz DR-700 (CD-R/RW), Dec. 38 Philips CDR 870 (CD-R/RW), Jan. 33;

CDR 765 (CD dubbing recorder), Oct. 64 Pioneer Elite CD-07D (cassette deck), Mar. 52 Sharp MD-X7 (MD), Jun. 66 Sony MZ-R50 (MD), Jun. 66

MiniDisc Players

Denon DMD-1000 (recorder), Jul. 33

JVC XU-301 (CD changer/MD recorder), Oct. 33 Kenwood 1050MD (recorder), Jun. 66 Sharp MD-S301, MD-X7 (recorder), Jun. 66 Sony MDX-C7900, MZ-R50 (recorder), Jun. 66

Minisystems

Bang & Olufsen BeoSound 2300/BeoLab 2500, Nov. 92
Denon D-M7, Nov. 92
Harman Kardon Festival 60, Aug. 50
JVC FS-7000, Nov. 92
Kenwood Avino, Nov. 92
Marantz MR2020, Nov. 92
Onkyo EX-1850, Nov. 92
Pioneer LifePlus NS-7, Nov. 92
Teac Reference, Dec. 56
Technics SC-HF55, Nov. 92

Receivers

B&K AVR202 (Dolby Digital/DTS), Nov. 47
Denon AVR-2700 (DD), Nov. 58
Harman Kardon AVR 85 (DD), Apr. 68
JVC RX-884V (DD), Jul. 35
Kenwood VR-209 (DD), Sep. 58; VR-2080 (DD/DTS), Dec. 31
Marantz SR-580 (DD), Jun. 52; SR-880 (DD), Apr. 68
Onkyo TX-DS747 (DD), Mar. 39; TX-DS555 (DD), Dec. 46
Sony STR-DA90ESG (DD), Apr. 68
Technics SA-AX6 (Pro Logic), Oct. 50
Yamaha RX-V793 (DD), Feb. 25

Speakers (home theater systems)

Atlantic Technology System 370, Apr. 58 Boston Acoustics VR12, VRS, V500, Sep. 82 Cambridge SoundWorks MovieWorks 5.1, Jan. 52; Ensemble II, Jul. 48 Carver Cinema 5.2, Jun. 64 Energy e:XL Series, Sep. 54 Klipsch Synergy Premiere, Sep. 50 M&K LCR-55/V-75 Mark II, Oct. 38 Mirage OM-12, Apr. 52; FRx, Nov. 64 Paradigm Monitor LCR-350/PDR-12, Sep. 82 Phase Technology Teatro 2.5, DS T, Teatro Center, Octave Power 10, May 46 Polk Audio RT400, CS225, RT f/x, PSW150, Sep. 82 PSB Alpha, Sep. 48 **Speakers (other)**

ACI Titan (powered-subwoofer kit), Apr. 46 Acoustic Research AR 216PS, Sep. 72 Advent Powered Partners AV390PL (multimedia), Oct. 78 Altec Lansing ADA310 (multimedia), Oct. 78 Aura Aspect 20/40 (multimedia), Oct. 78 B&W DM 302, Sep. 72; DM 305, Jan. 46 Bose Lifestyle 30, Feb. 35; MediaMate (multimedia), Oct. 78 Boston Acoustics Lynnfield VR960, Mar. 48; MediaTheater (multimedia), Oct. 78 Cambridge SoundWorks SoundWorks (multimedia), Oct. 78 Cerwin-Vega CVT-12, Nov. 54 DCM KX-7 Series Two, Mar. 56 Infinity Component Home Cinema System, Jul. 42 JBL HLS610, Sep. 72; MediaSystem 2000 (multimedia), Oct. 78 Klipsch KSB 3.1, Apr. 44 Legacy Accent, Dec. 41 NCT Gekko (sub/sat), Sep. 64

NHT Model 1.5. Feb. 30; SuperOne/ SuperTwo, Aug. 44; SuperZero Xu, Sep. 72 Niles OS-20 (indoor/outdoor), Aug. 46 Paradigm Monitor 70P, May 33 Platinum Audio PT-808, Jul. 44 Rock Solid Monitor, Sep. 72 Sound Dynamics RTS-3, Sep. 72 Sunfire True Subwoofer-Signature, Nov. 68 Velodyne CT-120 (subwoofer), Jun. 62

Surround-Sound Processors

McIntosh MAC-3 (Dolby Digital), May 36 Onkyo ED-301 (DD/DTS), Aug. 36 Technics SH-AC500D (DD/DTS), Oct. 50

Other Equipment

BSG Labs Intensor Chair, Oct. 56 Entec Number Cruncher 203.3 and 205.2 D/A converters, Aug. 40

RF-Link Digital Audio Sender, Oct. 56

XS Technologies Strata 800 uninterruptible power

supply, Apr. 54 Technics SP-DX6 digital surround-sound package, Oct 50

THE HIGH END (Greenberg)

Divx Is a Four-Letter Word, Jan. 112 Dipolar Disorder, Feb. 144 Format-of-the-Month Club, Mar. 112 A Standing Ovation, Apr. 108 Mobile Fidelity, Act II, May 96 Aisle of White, Jun. 108 New and Improved, Jul. 96 Bringin' It All Back Home, Aug. 96 The Truth Is Oot There, Sep. 112 Rose-Colored Asses, Oct. 112 DVD Audio V1.0, Nov. 136 DTX, THX, M-O-U-S-E, Dec. 116

HOME THEATER (Ranada)

Get with the Program, Aug. 28 Comparing DVD Players, Oct. 28 Falling Off the Edge, Dec. 27

PERIPHERALS

Hewlett-Packard and Ricoh CD-RW drives (Pohlmann), Mar. 22 Music Distribution via Internet (Pohlmann), Jun. 22 PCs and Home Theater (Fenton), Aug. 22 Philips DVX8000 multimedia home theater (Fenton), Sep. 38

SIGNALS/DIGITAL HORIZONS (Pohlmann)

Cruising Altitude, Jan. 28 The Mother of All Battles, Feb. 22 Into the Darkness, Mar. 34 DVD-Audio Will Set You Free, Apr. 32 What Buttons Do You Want to Push Today?, May 27 The Great Emancipator, Jun. 40 Passion Play, Jul. 26 Contents Under Pressure, Aug. 30 Hazardous to Your Health, Sep. 36 Work in Progress, Oct. 30 The Moonlight Sonata, Nov. 36 Must See TV, Dec. 26

SYSTEMS

Respite from the Real World (Fenton), Jan. 84 A Ton of Fun (Day), Aug. 72 Confessions of an A/V Junkie (Day), Nov. 106

TECH TALK

How I Got Started in Audio (Hirsch), Mar. 36 A Digital Fable (Ranada), Jul. 25 Tests, Reconsidered (Ranada), Sep. 34 In Search of Titanic Bass (Ranada), Nov. 32

TECHNICAL FEATURES

Amplifiers - see Comparison Tests

- Antennas see Clear Signals
- Autosound see Car Stereo

A/V I.Q. Quiz (Masters), Aug. 71, Nov. 103 A/V Receivers - see Receivers

Car Stereo: New for the Road (Sorcher),

May 67

- CES Showstoppers (Ankosko), Apr. 75 Clear Signals: How to Choose FM and TV Antennas (Fenton), Jul. 63
- Comparison Tests: Five Blockbuster Subwoofers (Nousaine), Mar. 62; Three Dolby Digital Receivers (Kumin), Apr. 68; MiniDisc Players (Pohlmann), Jun. 66; Multichannel Home Theater Power Amps (Kumin), Jul. 58; \$300 Stereo Speakers (Kumin/Pohlmann), Sep. 72; \$2,000 Home Theater Speaker Systems (Greenberg), Sep. 82; Three DVD Players (Ranada), Oct. 68; Multimedia Speakers (Nousaine), Oct. 78
- CD Excellence: Pros Pick Favorite Recordings, May 56

CD Recorders - see Recording

- Desktop Systems: Eight Executive Desktop Systems (Warren), Nov. 92
- Digital Audio: Remembrance of Things Past and Future (Pohlmann), Mar. 74; The Sound of Tomorrow (Day), Aug. 64

Digital Recorders - see Recording

- Digital TV see DTV, Technology Update
- Dipole Speakers see Speakers
- Divx Is Here (Gaughn/Evenson/Gilligan),
- Oct. 75 DTV: Dawn of DTV (Pohlmann), Dec. 60; What's
- On DTV Tonight? (Brockhouse), Dec. 68 DVD: Inside DVD (Ranada), Jan. 77; DVD-Audio (Brockhouse), May 61; Guide to DVD Players (Kumin), Aug. 53; also see Comparison Tests,

Digital Audio

Equipment Buying Guide, Feb. 51

Flashback (Hirsch/Ranada), Mar. 68

Holiday Gift Guide - Stocking Stuffers Home Theater: Dealer's Choice (Warren), Apr. 61; Solving the Home Theater Puzzle (Doris, Brockhouse, Sweeney, Day), Nov. 75; also see **Comparison** Tests

Inside DVD - see DVD

- Installation: On Location (Day), May 50; Doing It Yourself (Sweeney), Nov. 85; Leaving It to the Pros (Day), Nov. 90
- Minisystems see Desktop
- My First Stereo (staff), Mar. 80, Apr. 80, Jun. 82

Noise Pollution - see Sound & Fury

Receivers: 20 Questions about A/V Receivers (Kumin), Jan. 58; Guide to Digital Surround



- Receivers (Warren), Jul. 53 Recording: The Future of Home Recording (Warren), Jan. 67; Guide to Digital Home Recorders (Pohlmann), Oct. 59; also see Technology Update
- Reviewer's Choice, Dec. 73

Rodrigues Cartoon Caption Contest, Jan. 30, Jul. 18 Shopper's Survival Guide (Kumin), Feb. 44

- Sound & Fury: Noise in New York (Manu), Jan. 72 Speakers: Towers of Power (Kumin), Jun. 74; The Case for Dipole Surrounds (Holman), Jul. 68; Everything You Always Wanted to Know About Speakers (Clark), Sep. 67; How to Audition
- Speakers (Kumin), Sep. 79; also see Comparison Tests
- Stocking Stuffers (Scaduto), Dec. 79
- Surround Sound: Setting System Levels (Ranada), Jun. 84; Virtual Surround (Brockhouse), Aug. 58; also see A/V I.Q., Comparison Tests, Home Theater, Receivers, Speakers
- Technology Update: Digital TV Demystified (Barry), Jul. 29; Home-Recording Encryption Systems (Brockhouse), Nov. 38
- Tweaking an Audio System: Does It Make a Difference? (Nousaine), Jun. 79
- Upgrading to Home Theater: Starting From Scratch (Doris), Nov. 76; From Stereo to Multichannel (Brockhouse), Nov. 81
- Virtual Surround see Surround Sound

BEST RECORDINGS OF THE MONTH

Popular

Amos, Tori: From the Choirgirl Hotel, Jul. 75 Bottle Rockets: 24 Hours a Day, Jan. 87 Douglas, Dave: Stargazer: Music by and for Wayne Shorter, Feb. 121 Frisell, Bill: Gone, Just Like a Train, Apr. 83 Grant Lee Buffalo: Jubilee, Jul. 76 Harvey, P J: Is This Desire?, Nov. 108 Hersh, Kristen: Strange Angels, Mar. 85 Heyman, Richard X .: Cornerstone, Feb. 122 Hornsby, Bruce: Spirit Trail, Dec. 87 Kelly, Paul: Words and Music, Jun. 90 Lauderdale, Jim: Whisper, Mar. 86 Loveless, Patty: Long Stretch of Lonesome, Jan. 88 Lowe, Nick: Dig My Mood, Jun. 89 Mould, Bob: The Last Dog and Pony Show, Oct. 85 Page & Plant: Walking into Clarksdale, May 73 Phair, Liz: whitechocolatespaceegg, Sep. 89 Robertson, Robbie: Contact from the Underworld of Redboy, May 74 Williams, Victoria: Musings of a Creekdipper, Apr. 84 Wilson, Brian: Imagination, Aug. 77

Classical

- Bach: Violin Partitas Nos. 2 and 3, Sonata No. 3, Jan. 89
- Bartok: Violin Sonata No. 2, Jul. 77
- Beethoven: Symphonies No. 5 and No. 6, Jul. 75; Piano Sonatas Nos. 11, 12, 21, Sep. 98 Berlioz: L'Enfance du Christ, May 75
- Brahms: Symphonies Nos. 1-4, Academic Festival Overture, Haydn Variations, Jan. 87; Symphonies Nos. 1-4, Haydn Variations, Jun. 89
- Chopin: Piano Works, Apr. 85
- Donizetti: Lucia di Lammermoor, Nov. 120
- Gounod: Roméo et Juliette, Aug. 78
- Penderecki: Violin Concerto No. 2, Jul. 77
- Puccini: Opera Arias, May 73
- Strauss, R.: Elektra, Feb. 121
- Tan Dun: Polo: An Opera Within an Opera, Mar. 87 Vivaldi: Violin Concertos, Op. 12, Mar. 85

Bonney, Barbara: Sallie Chisum Remembers Billy the Kid, Jun. 91

- Fleming, Renée: Signatures, Feb. 123
- Robert Shaw Conducts Bartok, Vaughan Williams, and Barber, Dec. 98
- Terfel, Bryn: Handel Arias, Apr. 83

Upshaw, Dawn: The World So Wide, Oct. 96

MUSIC FEATURES

CD Boxed Sets (Richardson/Ripps), Dec. 83 Center Stage: Kurt Masur (James), Mar. 106 Disgraceland, Feb. 42

Record of the Year Awards, Feb. 39 Sinatra, Frank: Tribute (Christgau/Friedwald),

Aug. 69

Top 40 Pop and Classical Albums of Four Decades That Still Matter (Richardson/ Ripps), Mar. 77

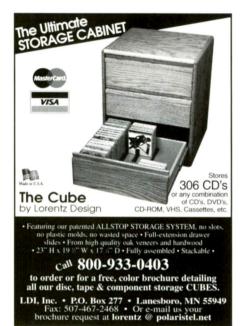


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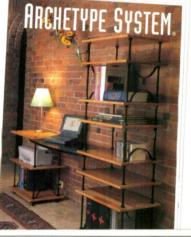
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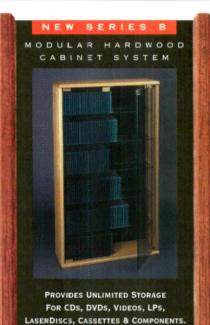
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TIPS FOR MAIL ORDER PURCHASERS

It is impossible for us to verify all of the claims of advertisers, including product availability and existence of warranties. Therefore, the following information is provided for your protection.

 Confirm price and merchandise information with the seller, including brand, model, color or finish, accessories and rebates included in the price.

2. Understand the seller's return and refundpolicy, including the allowable return period, who pays the postage for returned merchandise, & whether there is a "restocking" charge.

3. Understand the product's warranty. Is there a manufacturer's warranty, and if so, is it from a U.S. or foreign manufacturer? Note that many manufacturers assert that, even if the product comes with a U.S. manufacturers warranty card, if you purchase from an unauthorized dealer, you are not covered by the manufacturer's warranty. If in doubt, contact the manufacturer directly. In addition to, or instead of, the manufacturer's warranty, the seller may offer its own warranty. In either case, what is covered by warranty, how long is the warranty period, where will the product be serviced, what do you have to do, and will the product be repaired or replaced? You may want to receive a copy of the written warranty before placing your order.

4. Keep a copy of all transactions, including cancelled checks, receipts and correspondence. If you pay by credit card, you may have a greater recourse in the event the advertiser does not perform. (Check the complaint procedures of your credit card companies). For phone orders, make a note of the order including merchandise ordered, price, order date, expected delivery date, salesperson's name.

 If the merchandise is not shipped within the promised time or if no time was promised, 30 days of receipt of the order, you generally have the right to cancel the order & get a refund.
 Merchandise substitution without your express prior consent is not allowed.

7. If you have a problem with your order or the merchandise, write a letter to the seller with all the pertinent information & keep a copy.

 If you are unable to obtain satisfaction from the seller, contact the consumer protection agency in the seller's state or your local Post Office.

If, after following the above guidelines, you experience a problem with a mail order advertiser that you are unable to resolve, please let us know. WRITE to Susan Ross, Special Marketing, 45th Floor, Hachette Filipacchi Magazines, 1633 Broadway, NY, NY 10019. Include copies of all correspondence.



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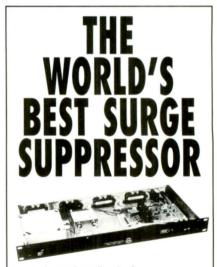
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16

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DTS, THX, M-O-U-S-E

DTS AND THX have long been The Audio Gangs Who Couldn't Shoot Straight, but both recently made the news with behavior so startlingly dumb that my will to loathe is starting to thaw into something approaching - dare I say it? - sympathy. I've seen both of these companies fight logic and reason tooth and nail without advancing the art of sound reproduction, and I've been heartened by the growing sentiment among A/V manufacturers and consumers alike that DTS and THX are simply well-funded and (at least in the case of THX) well-oiled marketing efforts. That hasn't stopped either company from trying to elbow its way to the trough, but their latest exploits don't merely call for a sad shake of the head ---they call for the fat lady to gargle some salt water and give it one last yodelayhee-hoo.

DTS is in the news because the company is threatening to derail the product launch of DVD-Audio. Remember when Tonya Harding fell on her ass in the Olympics and then begged the judges for another chance because her skate laces had come untied? DTS must have jumped up and shouted, "You go girl!" because it's playing the same excuse card with the WG-4, the industry-wide group that decided the DVD-Audio standard.

Last month I told you about the WG-4's approval of Meridian's MLP lossless audio compression for the official DVD-Audio format specification. MLP was chosen because, by keeping all the original data but packing it more efficiently on the disc, it gives all the space-saving benefits of lossy data-compression systems like DTS and Dolby Digital - increased playing time and resolution - without any loss in fidelity. But even though the WG-4 made it patently, abundantly clear that only a lossless compression system like Meridian's would be acceptable for DVD-Audio, DTS is actually threatening to sue the WG-4 because its lossy compression system was rightly rejected in favor of Meridian's technically superior approach.

Actually, DTS's story keeps changing. First it cried foul because its lossy compression wasn't adopted for DVD-Audio. Then, when it was s-l-o-w-l-y pointed out, a-g-a-i-n, that only a *lossless* system would be acceptable, DTS actually had the nerve to claim that it, too, had a lossless compression system in the works, if only the WG-4 would grant them a little more time to get the bugs out. Never mind that DTS had never mentioned that it was working on a lossless compression system until the WG-4 voted to approve Meridian's MLP.

This is vintage DTS, begging the industry to wait for it to tie its skate laces even though someone smarter — first Dolby, and now Meridian — has already hit the triple lutz and left the ice to cheers. Hell, I used to employ this excuse tactic myself — when I was in high school. "Um, I can't turn in my paper because, um, the ink ran out of my pen, and, um, there were no other pens in the house, and, frankly, I was distracted by *Happy Days*' season-ending cliffhanger when reread the last three paragraphs and join the rest of us.

While DTS alienates most of the audio world, THX seems to be continuing its slide from Lady Justice to the Happy Hooker. Where once THX and its sincedeparted founder Tomlinson Holman boldly nailed a set of audio standards to the church door, standards that they claimed would insure true movie-theater sound in the home, now THX is dumbing down its requirements like a Florida school system so that even the kids who can't read get to graduate.

The company says that its new THX Select designation is being introduced for speakers, amplifiers, and A/V receivers meant for rooms measuring up to 2,000 square feet, as opposed to the previous THX target of 3,000 square feet. The minimum requirements for power output, noise, distortion, and speaker directivity have all been, ahem, relaxed for the new THX Select designation. The old set of standards, now to be called THX Ultra, will continue to identify those home the-

I've seen both DTS and THX fight logic and reason tooth and nail without advancing the art of sound reproduction.

Fonzie tried to water-ski jump over the sharks, and it was too late to go buy another pen, so can I please have another week to finish my paper, Miss Crabtree?" Unfortunately, I wasn't as savvy as DTS, or I would've sued the school because I needed more time to write my three-page essay on which Brontë sister was duller to read, Emily or Joanie.

Though DTS has always claimed wide and vigorous manufacturer support, the WG-4's final vote on whether to adopt Meridian's MLP was an overwhelming 47 to 1, with DTS casting the only nay. Incredibly, DTS vice chairman Dan Slusser is on record as claiming his company has the legal right to block the shipment of DVD-Audio hardware and software (see How to Win Friends and Influence People) until the WG-4 gives DTS another shot. If you're one of the dozen or so audiophiles left who hasn't long since come to the realization that DTS may be the single most brain-dead company this industry has ever seen, please ater products whose performance is good enough to earn a front-panel THX badge — except, of course, for those products that will now be able to display the allbut-identical-looking THX Select badge.

I think THX could be onto something here. What about a new sub-class of product certification called "THX Velveeta," to be sported only by those \$200 rack systems at Wal-Mart that offer best-ofclass performance? "THX Disposa" could be the prize ribbon worn by the finest under-\$50 portable cassette players with pictures of Disney Babies on the lid. Ever have a guy in a white van drive up to you while you're pumping gas and offer to sell you "name brand" speakers for a song 'cause his buddy works at the loading dock and yada yada? Slap the "THX Sucka" badge on those babies and watch 'em fly out the back door. And I bet you'd feel better about those \$20 plastic multimedia speakers that came with your computer if they wore the "THX Wassamatta U." logo. I know I would.

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