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HOME Better sound through research®
The first step to good homemade tapes is investing in a good recorder, such as the Teac W-6000R cassette deck shown here atop Onkyo's A SV810PRO integrated amplifier. See page 81 for our Home Recording Buying Guide, page 60 for taping tips, page 77 for a look at integrated amps.

Photograph by Dan Wagner

EQUIPMENT

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How to Make Good Tapes
A practical guide to home recording • by Steve Schwartz

Trade Secrets
10 ways to make your equipment shopping hassle-free • by Mark Elson

The Forgotten Component?
Looking for power and control in one package? Take another look at the integrated amp • by Daniel Kumin

Tape Recording Buying Guide
Features, specs, and prices for analog and digital recorders, blank tapes and discs • by Bob Ankosko, José Garcia, and staff

MUSIC

Richard Thompson
Let's get one thing straight—despite his reputation as a gloom-monger, Thompson doesn't write depressing songs • by Brett Milano

Best Recordings of the Month
Kate Bush stretches out in “The Red Shoes,” Kevin Montgomery makes some American music, Isaac Stern and Yefim Bronfman set a new standard for Brahms sonatas, and Eliahu Inbal leads the Vienna Symphony in a stunning Shostakovich Third
WINTER CES HIGHLIGHTS

Home theater, surround for music, audio-equipped multimedia computers and TV-based systems, and high-tech audio shared the spotlight at the 1994 Winter Consumer Electronics Show held recently in Las Vegas.

Home theater/surround sound: The response to demonstrations of Dolby Surround Digital, the discrete six-channel digital format and designated successor to the current Dolby Surround system, was overwhelmingly positive, leaving many to speculate about its role in the future of home audio and video. Unlike previous theatrical previews, the AC-3-based system was demonstrated using prototype consumer gear.

Among the hordes of new products was B&O's first home theater system, built around the $2,000 AV 7000 surround-processor/amp. Atlantic Technology had a few tricks up its sleeve, too, including a center-channel speaker with timbre controls.

THX disciples welcomed a few new tricks up its sleeve, too, including a center-channel speaker with timbre controls.

THX: Audio: Carver showed the first "load independent" stereo power amplifier, the 300-watt Lightstar. It's slated for retail delivery in May at a price of $3,000.

Luxman announced that 50,000 MiniDisc machines were shipped to dealers in the U.S. last year and unleashed a barrage of new MD products, including the shirt-pocket-size MZ-EZ player ($550) and MZ-R2 recorder ($750), due in stores this spring. Sharp showed the MZ-M11 handheld MD recorder ($750), which is due in April.

Except for the $599 RS-DC8 recorder and a DCC-based minisystem from Technics, the DCC camp was quiet.

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Luxman unveiled two new product lines, the 300 Series and the high-end Ultimate Series, and announced that they will be distributed by Minneapolis-based Canton Electronics.

Triad demonstrated a line of in-wall, servo-controlled powered subwoofers ranging in price from $500 to $1,500.

In-wall speaker pioneer Sonance showed its first cabinet speaker, the Director 20, featuring a 6-1/2-inch coaxial driver with a pivoting tweeter; the $30C speaker goes to stores in April.

Multimedia: The presence at CES of IBM, Compaq, Microsoft, Intel, and scores of other computer hardware and software companies signaled the growth to come in this fledgling category.

On the TV-based side, Philips announced that 200,000 CD-I machines were sold worldwide last year. 3DO demonstrated forty-three machines later this year.

AIDS AWARENESS USA

Mary-Chapin Carpenter, Mark Chesnutt, and Kathy Mattea are prime movers among the country-music stars engaged in a new AIDS-prevention campaign aimed primarily at audiences in the Southern states and in rural America, where AIDS is spreading fastest.

Randy Scruggs is the musical supervisor of "Red Hot + Country," an AIDS benefit album modeled on the pop album "Red Hot + Blue" (which won a Record of the Year Award from STEREO REVIEW in 1992). "Red Hot + Country" is due from Mercury this spring. In addition to Carpenter, Chesnutt, and Mattea, performers on the CD include Billy Ray Cyrus, Brooks and Dunn, Rodney Foster, Dolly Parton, and Marty Stuart.

HIGH PROFILES

In Britain's New Year's Honors, the singer Shirley ("Goldfinger") Bassey was made a Commander of the British Empire. At the Image Awards of the National Association for the Advancement of Colored People (NAACP), Michael Jackson was dubbed Entertainer of the Year. Mr. Blackwell's 1994 list of the world's worst-dressed women included the singer Diana Ross. She came in third, after the actresses Glenn Close and Julia Roberts.
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Equipment for Music Only

Michael Klasko's "Acoustical Tune-Up" in January was quite good in describing how to get rid of unwanted sound reflections, but he did not get into the room interactions of different speaker designs. Some speakers use reflections from the walls behind them to increase realism, and others use narrow-angle vertical dispersion to eliminate ceiling and floor echoes. Which is best for music-only listening as opposed to movie soundtracks? Is there a better approach to building a sound system for music listening only rather than one for both audio and video? Do I need either DSP or Dolby Pro Logic for true reproduction of music? How many channels do I need? — Richard Schulkind, Sharon, MA

In general, reflections off the walls are less problematic than reflections off the floor and ceiling, and, in fact, people prefer to hear some sound arriving from the sides. In two-channel stereo this lateral sound is provided by reflections of the output from a pair of speakers at the front of the room, in surround-sound systems, whether based on Dolby Surround or DSP ambience enhancement, it comes predominantly from additional speakers placed for that purpose. Whether it is desirable to restrict the vertical dispersion of front speakers depends more on whether they can be placed at ear level than on what type of program they will reproduce.

Very few music recordings are encoded for Dolby Surround, though the number is growing, so if you're not interested in playing movie soundtracks you probably don't need Dolby Pro Logic. Good multichannel ambience enhancement is very nice, though, and in the future we expect there will be a move to discrete multichannel digital recording for both music and soundtracks. In short, for listening strictly to music you probably would be quite happy with a good two-channel stereo system. You probably would be even happier, though, with four or more speakers fed from a high-quality DSP-based ambience-enhancement system.

Audio Cables

Most people who buy audio/video systems aren't physicists and have to rely on very subjective and opinionated evaluation equipment—their ears! But in January's "Technical Talk," about audio cables, Julian Hirsch contends that "believing is hearing" and that we are brainwashed into conclusions about sound quality that are "pure nonsense."

Perhaps Mr. Hirsch can't hear the difference between audio cables, and that's fine. He's saving lots of money using 16-gauge zip cord in his system. But allow us hobbyists to "fool" ourselves into purchasing cables that make our systems sound better. I say "the Emperor" does have new clothes, and audio cable can make a significant difference in the performance of a good hi-fi system.

— Steve Swank
Bellingham, WA

Thanks to Julian Hirsch for telling it like it is in "Audio Cables: Fact and Fiction." I have always suspected the claims for these overpriced cables and guided myself accordingly. For line-level cables between components feeding the amplifier I have always used, without any problems, the least expensive Radio Shack cables. For speaker wire I went to Sears and bought outdoor 16-gauge wire. To my ears my system is performing perfectly. — Julius Brodsky
S. Ozone Park, NY

Digital Dubbing Rights

One major issue has been left out of the discussion about the Serial Copy Management System (SCMS). If I record a demo tape, a local concert, or another original work using a DAT deck (or another type of digital recorder), I am limited to making first-generation digital copies. If I want to edit a digital copy of the original and use that as the copying master, I am stuck because of SCMS unless I buy a digital mixing board and turn it off. Is there any hope for DAT users like me? — Gary Chamberlain
Warner Robins, GA

Professional DAT decks are not required to honor SCMS, so that would be an option. Pro models do typically cost more than consumer decks, however. If you're careful, going through a cycle of digital-to-analog-to-digital conversion will entail little or no loss of sound quality. That might be the most practical solution, if not the ideal one.

Powering a Subwoofer

December's "The Lowdown on Subwoofers" was ambiguous regarding power needs. How much power should a subwoofer get? The same amount as the main channels? Or would less be sufficient since it handles only a small fraction of the music? — Chris D. Libertino
Nesconset, NY

The article was ambiguous on that point because it is not possible to be more definite. It depends on the relative sensitivities of the main speakers and the subwoofer, the crossover frequency between them, the low-pass...
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content of the music typically played on the system, and so forth.

More on Surround EQ
In a reply to two letters in December, you said that equalization can be used with no negative effect on the surround-sound experience "so long as it is applied to the signal after decoding rather than ahead of it." Wouldn't that always be the case? Doesn't the signal always go through the equalizer after passing through the amplifier?

Also, we are usually told that Dolby Pro Logic should be used only for movie soundtracks that were mixed (or remixed) for surround sound. But wouldn't any stereo soundtrack, even an older one, benefit from being played in Pro Logic mode in order to anchor the dialogue to the screen?

Finally, some CD's, including all-instrumental recordings, have been issued in Dolby Surround. When the sound of a symphony orchestra is played with Dolby Pro Logic decoding, what comes out of the center-channel speaker? Wouldn't it be better to play such a recording in another surround mode such as Hall?

An equalizer never goes after an amplifier. It might be placed between a preamplifier and power amplifier—or between a surround decoder and a power amplifier. Usually, however, equalizers are connected to a tape loop or external-processor loop, which would be immediately downstream of the receiver or preamplifier's input selector and ahead of any other circuitry. There's nothing to prevent you from switching in a Dolby Pro Logic decoder on any program material, even plain music. What will you get with programs not specifically encoded for Dolby Surround playback is a shifting of the stereo image toward the center, possibly other slight image inaccuracies, and somewhat indistinguishable behavior by the surround speakers, which may not sound right all the time.

A music release mixed for Dolby Surround playback should have a very firm center image. In order for the imaging and the frequency response of the surround channels to come out right, however, it really should be played through a Dolby Pro Logic decoder. Any added ambience effects should be introduced after decoding.

In response to Deric Christensen's letter in December, you said, "If you just want to use an equalizer for ordinary stereo listening ... put it into the tape-monitor loop, where it can be easily switched in and out of the system. Just make sure it's bypassed when the surround decoder is engaged."

Why? I leave my equalizer on because I think it sounds better that way. Do I have a tuner? Am I doing any harm to any component?

An equalizer in the tape-monitor loop will be ahead of the surround processor and therefore is best not used when the processor is engaged. The reason for not equalizing before decoding is that Dolby Pro Logic steers signal components to the various output channels according to their relative amplitudes and phases in the encoded stereo input signal. An equalizer can change those characteristics in ways that will cause errors in surround decoding. To apply equalization after decoding, you need access to the individual processor outputs and power-amp inputs. Some A/V receivers provide the necessary connections, others don't. And with a conventional stereo equalizer, you'd be able to equalize only two of the four channels, unless you used two equalizers.

Illogical MD Pricing?
In a local record store recently, I noticed a classical Minidisc—an all-digital recording by a reputable orchestra—selling for $7.99, while a blank 60-minute MD was $12. Why would a prerecorded MD, whose price needs to cover royalty payments for the music, the musicians' fees, the recording and mixing costs, and the disc itself, cost less than a blank disc?

Readers John Martinetto and Michael Deluca also told us about Parke Puterbaugh's Porno for Pyros review, in which he compared that group to Van Halen, described as "fronted by an obnoxious, posturing nincompoop; self-involved, flippant, and tattooed ..." I noted that neither of the nincompoops presently or formerly fronting Van Halen has a tattoo. After my letter appeared, it was brought to my attention that Sammy Hagar, Van Halen's current frontman, does, in fact, have a tattoo. I stand corrected.

Correction
The test report on the Nakamichi MB-4s CD changer in February incorrectly stated that its loading drawer can be opened while a disc is playing. That is not possible. Also, the text mentioned an incorrect price. The correct price is $399, as given in the accompanying box.

We welcome your letters. Please address correspondence to Editor, Stereo Review, 1633 Broadway, New York, NY 10019. You should include your address and telephone number for verification. Letters may be edited for clarity and length.
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Think about it: The 575x from Boston Acoustics.

The goal of a surround-sound speaker is to create an entirely different world in your living room. To fool your ears into thinking they’re inside a submarine. Or a baseball park. Or a heavily armored Petrusian galactic battle fortress.

Surprisingly, ordinary surround-sound speakers producing direct sound can’t pull this off. But the new Boston 575x dipolar surround speaker can. With ease. That’s because it takes full advantage of reflected sound to create a realistic listening experience.

The advantage of the 575x is tough to pinpoint. In order to fool your ears, a surround system must create a diffuse sound field all around you, rather than one your ears can pinpoint. In a movie theater, this is accomplished by placing several large speakers (usually our highly respected Boston A70T commercial surrounds) on side walls at regular intervals. But unless you live in a renovated dirigible hangar, you probably can’t do the same thing. So, we reasoned, instead of filling your walls with speakers, why not design a pair of speakers that fills your walls with sound. Here’s how. On either side of the 575x is a 2 ½-inch tweeter/midrange—one firing forward, the other back. These drivers are out of phase with each other (i.e., when one is pushing air out, the other is pulling air in), which is known as a dipolar configuration. Aiming toward the center of the room is a single 5¼-inch woofer that radiates low frequencies which the human ear cannot localize. When mounted on a side wall or the ceiling, the sound from the two tweeter/midrange drivers reflects off several things—rear and front walls, the ceiling, the floor, your prized swizzle stick collection—before it reaches your ears. You can’t tell where the sound is coming from. It’s all around you. It sounds real. (With ordinary speakers that fire
Understanding why the new 575x is a superior surround speaker takes some reflection.

toward the listener, sound is easily localized, and the effect is lost.)

Small, yet powerful: The Yoda of surround speakers.

At just eight pounds, the 575x demonstrates some pretty impressive specs. For example, the home THX® standard says that a surround speaker must handle at least 100 watts of power. The 575x is rated to 125. This translates into a speaker that handles a huge amount of energy and sonic information, cleanly. With virtually zero distortion. Other vital stats: The 575x comes complete with a nandy bracket for easy wall mounting. Plus, it's available in either black (for those who want to show off their cool, new speakers against clean, white walls) or white (for those who don't).

It's a THX surround. It's a Pro Logic® surround. It's a breath mint.

It's true. Boston engineers have gone to the trouble of creating a perfectly tuned and matched set of speakers that meets the rigid specs set down by George Lucas for home THX systems. They include 555x left/center/right speakers. Powerful 595x subwoofers. And 575x dipolar surrounds. But if you own a Dolby® Pro Logic® receiver, the 575x is the ideal surround for you, too. How can a surround speaker be perfect for both THX and Dolby? Easy. The laws of physics and sonics don't change when logos do. Both THX and Dolby Pro Logic benefit from a diffuse sound field for realistic surround effects. Which is what the 575x does best. In fact, we believe that the 575x is the finest surround speaker ever conceived — regardless of the playback standard. (Just kidding about the breath mint thing.)

In order to be a better couch potato, you need to leave the house.

Get your hand out of those cheese curls, grab your car keys and visit your local Boston dealer. There, you can witness firsthand the impressive sound of the 575x surround speaker. Not to mention the entire line of Boston Acoustics home theater components. We bet you've never heard anything like it. Unless, of course, you've actually been inside a heavily armored Petrusian galactic battle fortress before.

Get our mini-magazine. Number. It's 60 pages of cool music, movies and nearly free CDs (plus lots of photos for those with short attention spans). Write Boston Acoustics, Dept. NL, 70 Broadway, Lynnfield, MA 01940.

Let's clear up the confusion. Use the 575x in a THX system, and it sounds great. Use it in a Dolby® Pro Logic® setup, and it also sounds great. Sound good? Great.
30 Years Ago

In the March 1964 issue, Technical Editor Larry Klein reported on a demonstration of the British-made Telecan home video recorder, a $200 unit that recorded TV pictures on standard quarter-inch audio tape. Noting its potential to “initiate a new era in home entertainment,” Klein was nonetheless disappointed with the results. “I did not find the picture quality acceptable,” he wrote, “although a number of my colleagues did not share my negative reaction.”

New products this month included the Freeman 600 three-speed tape recorder with built-in amp and speakers ($399.50), the H.H. Scott 350C stereo FM tuner ($224.95), and the Superex ST-M stereo headphones, which had separate woofer and tweeter elements and a miniature crossover in each earpiece. In test reports, Julian Hirsch went hands-on with the Hadley 601 power amplifier, rated at 40 watts per channel, and “experienced the same sense of total ease and almost limitless power reserve I associate with the two or three finest amplifiers I have used.”

Listening to Prozak? In a review of an Angel disc of Poulenc’s Stabat Mater, William Flanagan called the piece “a magnificent work and a moving one” despite its “breathtaking musical vulgarity.”

In Best of the Month, Igor Kipnis endorsed an Argo recording of English virginal music played by harpsichordist Colin Tilney (“Superbly stylish, deeply felt, and musically penetrating”), and Noel Coppage came out for the Kinks’ “Preservation Act I” (“Ray Davies does more with melody than any post-Beatles rock composer”). Elsewhere in the review sections, Eric Salzman knocked Murray Perahia’s Schumann recording on Columbia (“An excellent pianist, but his Schumann has not yet ripened”). And Joel Vance, confronting Gregg Allman’s “Laid Back,” declared, “If Gregg Allman ever made a public statement that the earth is flat, I would give it serious consideration.”

New products this month included the Hear-Muffis QM-440 four-channel headphones, with drivers positioned in front and back of each ear, the Dokorder 7140 reel-to-reel tape deck ($54.94), and the Magnepan Tympani speaker systems with dynamic panel drivers. In test reports, Julian Hirsch called the Sansui QRX-3500 four-channel receiver “the most effective and universal matrix receiver we have seen” and praised Electro-Voice’s equalized Interface:A speakers for “a level of unflustered bass far superior to that of any other speaker of its size.”

Field of Germs: In a profile of Michael Tippett, viewed as Benjamin Britten’s competitor for the title of Greatest Living British Composer, Bernard Jacobson quoted an unnamed source to the effect that, “If Britten sneezes, they record it.”

10 Years Ago

New products this month included the Sanyo CP200 CD player, which could be programmed to play up to sixteen tracks in any order ($549.94), the B&W DM2000 five-sided speaker, whose enclosure was designed to reduce internal standing waves that could interfere with bass/midrange cone motion, and the Koss Porta Pro headphones, with a frequency response rated from 15 to 25,000 Hz. In test reports, Julian Hirsch evaluated the unique Nakamichi RX-505 autoreverse cassette deck, which turned cassettes over rather than reversing the direction of play, and declared it “a member of that small, elite group of cassette decks that truly deserve the appellation ‘state of the art.’”

Hollywood Babylon Revisited: Puzzled by a lyric in Juice Newton’s “Dirty Looks” album—“Some people die before their time...but I want to go like Sal Mineo”—reviewer Alanna Nash asked, “What does that mean? That she wants to be stabbed in a parking lot by a pizza delivery boy?”

—Steve Simels
Genesis—Livin’ The Way We Walk Vol. 2: The Longs (Atlantic) 467-381
Reba McEntire—Greatest Hits Volume Two (MCA) 467-316

Nirvana—In Utero. Serve The Servants. Heart-Shaped Box, plus others (Geffen)

Melissa Etheridge—Yes I Am (Island) 466-763
The Breeders—Last Splash (Elektra) 469-351

Fourplay—(Ritournel, Mason, James, Ewing) Between The Sheets (Warner Bros.) 464-578
Babyface—for The Cool In You (Epic) 464-222

Billy Joel—River Of Dreams. Title cut: All About Soul, Heartbreak Hotel, plus more (Columbia) 463-695

Mark Chesnutt—Almost Goodbye (MCA) 466-703
Billy Ray Cyrus—It Ain’t No Fun (Mercury/Nashville) 463-240

Aerolaht—Get A Grip (Sony, Linn On The Edge, Eat The Rich, etc.) (Geffen) 458-075

Blind Melon—No Rain. Tones Of Home, If I Wonder. Soak The Sun: more (Capitol) 447-995

B.B. King—Blues Summit (MCA) 463-505
The Black Crowes—The Southern Harmony And Musical Companion (American) 462-192
Dave Koz—Lucky Man (Capitol) 461-484

Free Willy—(Orig. Soundtrk. (MCA) 466-731
Bjork—Debut (Elektra) 461-152
Neil Young—Unplugged (Reprise) 460-972

Tears For Fears—Elemental (Mercury) 460-808
The Steve Miller Band—Wide River (Polydor) 460-758
Natalie Cole—Take A Look (Elektra) 460-741

Little Texas—(Big Time (Warner Bros.) 460-204
Paul McCartney—All The Best (Capitol) 459-776
Kiss—AliveIII (Mercury) 459-636
Robert Plant—Fate Of Nations (Es Elbara) 459-824
Tanya Tucker—Greatest Hits 1980-1992 (Liberty) 458-635
Gloria Estefan—Mia Tierra (Epic) 458-497

Anthrax—Sound Of White Noise (Elektra) 458-489
Dave Grohl—Homage To Duke (GRP) 458-471
Donald Fagen—Kamikaze (Warner Bros.) 458-463
Toby Keith—(Mercury Nashville) 458-515
Yanni—In My Time (Private Music) 458-018

Coverdale/Page—(Atlantic) 457-986
Aaron Neville—The Grand Tour (A&M) 457-200
Sting—Ten Summoner’s Tales (A&M) 456-561

John Michael Montgomery—Life’s A Dance (Atlantic) 453-746
Sade—(Love Deluxe) (Epic) 449-339
Garth Brooks—The Dance (Liberty) 448-746

ABBA—God Greatest (Polydor) 458-046
4 Non Blondes—Bigger, Better, Faster, More. (Interscope) 458-042
Red Hot Chili Peppers—What Hits? (EMI) 457-309
Foreigner—The Very Best. And Beyond (Atlantic) 457-524
Eric Clapton—Unplugged (Reprise) 456-187
Michael Bolton—Timeless (The Classics) (Columbia) 454-894
Ugly Kid Joe—America’s Least Wanted (Atlantic) 454-910
George Thorogood And The Destroyers—The Baddest Of The Bad Hits (EMI) 454-405
Vince Gill—I Still Believe In You (MCA) 453-571

Taylor Swift—(Atlantic) 453-920
Sade—(Love Deluxe) (Epic) 453-746
The 411? (Uptown/Maverick/Sire/Warner) 433-980/394-184
The 411?—(Atlantic) 438-184/390-184
112—(Atlantic) 439-778/399-774

Blind Melon—No Rain. Tones Of Home, If I Wonder. Soak The Sun: more (Capitol) 447-995

Boyz II Men—(Cooley High/Arabian) 424-754
Madonna—(Virgin) 414-557
The Best Of Luther Vandross (Epic) 400-473/390-476

De La Soul—Buhloone Mindstate (Tommy Boy) 400-981
Madonna—Erotica (Maverick/Sire/Boy) 400-983
Sade—Lover Deluxe (Epic) 399-648
Vince Gill—I Still Believe In You (MCA) 395-571

Prince—The Hits 1 (Parloax Park) 466-623
Prince—The Hits 2 (Parloax Park) 466-631
Prince—The Hits (Parloax Park) 466-623
Prince—The Hits 2 (Parloax Park) 466-631

Luther Vandross—Never Let Me Go (Epic) (LP Records) 457-176
Jose Jeckyl—S.O.B. (MS Records) 457-171
Nick Johnson—(ATCO) 456-271

Maze Featuring Frankie Beverly—Back To Basics (Warner Bros.) 456-555
The O’Jays—Heartbreaker (EMI) 456-345
Robin S—Show Me Love (Big Beat/Atlantic) 456-790
Blondie—(London) 456-923

Tony Toni Tone—Sons Of Soul (Mercury) 456-379
Sir Mix-A-Lot—Mac Daddy (American) 456-370
The Struts—(Atlantic) 456-920
Dr. Dre—The Chronic (Death Row/Interscope) 456-920
MC Lyte—(Ain’t No Other (First Priority Music) 456-920
Gloria Estefan—Greatest Hits (Epic) 455-506

N Sync—(Dawn Records) 455-506
Gloria Estefan—(Epic) 455-506

N Sync—The 411? (Atlantic) 455-506
 ratified=21

Boy George—(MCA) 449-540
Michael Jackson—Dangerous (Epic) 449-524
N Sync—(Dawn Records) 449-540

TLC—Ooohhhhhhhhh (LaFace) 443-621
Michael Jackson—Dangerous (Epic) 443-920
N Sync—(Dawn Records) 443-920

Sleepy Southern—(Atlantic) 442-020
Earth, Wind & Fire—Milestones (Reprise) 441-706

NTSC—Runaway Love (Atlantic) 441-016
Janet Jackson—Rhythm Nation 1814 (Mercury) 441-016
Public Enemy—Apocalypse 91 (Def Jam/Columbia) 428-003
Columbia House.

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Alan Jackson—A Lot About Livin’ (And A Little About Love) (Arista) 447-458
Enya—Shepherd Moons (Reprise) 431-718
U2—Achtung Baby (Island) 431-213
Frank Sinatra—Sinatra Revisited/The Very Good Years (Reprise) 430-9036
Brooks & Dunn—Brand New Man (Arista) 429-969
Mötley Crüe—Deuce Of Decade '81-'91 (Elektra) 429-016
Brooks & Dunn—Hard Workin’ Man (Arista) 454-025
Alice In Chains—Dirt (Columbia) 455-433
Red Hot Chili Peppers—Blood Sugar Sex Magik (Warner Bros. Elektra/Epic) 428-967
Ozzy Osborne—No More Tears (Epic Associated) 428-128
Phantom Of The Opera—Highlights (London Cast) (Polydor) 424-333
John Cougar—American Fool (Columbia) 443-566
Bonnie Raitt—Luck Of The Draw (Columbia) 423-186
R.E.M.—Automatic For The People (Warner Bros.) 448-522
Marah Carey—Music Box. Dreamland (Epic) 439-968
Nirvana—Nevermind (DGC) 442-046
Eric Clapton—Journeyman (Reprise) 400-457
Aerosmith—Pump (Geffen) 388-009
The Cranberries—Everybody Else Is Doing It, So Why Can’t We? (Linger, etc. Island) 465-559

Cypress Hill—Black Sunday (Elektra) 465-596
Spin Doctors—Pocket Full Of Kryptonite (Epic/A&M) 429-482
Kenny Rogers’ Grt. Hits (Liberty) 313-700
AC/DC—Back In Black (Atlantic) 305-045
John Hiatt—Perfectly Good Guitar (A&M) 465-385
Jean Luc Ponty—No Absolute Time (Atlantic) 446-297
Chris Ledoux—Under This Old Hat (Liberty) 461-631
Dire Straits—On The Night (Warner Bros.) 458-448
Vince Neil—Exposed (Warner Bros.) 457-143
Lynyrd Skynyrd—Last Of The Street Dogs (Atlantic) 454-538
White Zombie—La Sexorcisto: Devil Music, Vol. 1 (Elektra) 439-797
Stanley Clarke—East River Drive (Elektra) 449-777
Great White—Psycho City (Capitol) 447-565
Faith No More—Angel Dust (Reprise/Silas) 439-507
Tom Cochrane—Mad Mad World (Capitol) 453-685
Pearl Jam—Ten (Epic/Associated) 429-433

The Allman Brothers Band—A Decade Of Hits 1969-79 (Polydor) 430-439
Rod Stewart—Sting II Again Rod (Mercury) 423-822
Rush—Chronicles (Mercury) 423-7388/937-785
The Very Best Of The Righteous Brothers—Unchained Melody (Verve) 423-772
The Moody Blues—Grt. Hits (Polydor) 423-756
Eric Clapton—Time Pieces (Polydor) 423-467
Best Of The Doobies (Warner Bros.) 291-728
David Bowie—Changes—New Man (Atlantic) 430-9036
John Lennon Collection (Capitol) 405-508
Lynyrd Skynyrd—Skynyrd’s Innyrd/Their Gt. Hits (MCA) 381-129
Jimi Hendrix—The Ultimate Experience (MCA) 458-034
Roy Orbison—The All-Time Hits, Vols.1 & 2 (CSP) 377-045
The Who—Who’s Next (MCA) 376-657
Fleetwood Mac—Gt. Hits (Warner Bros.) 375-782
Stevie Wonder—16 Gt. Hits (MCA) 272-425
Marvin Gaye’s Gt. Hits (Motown) 367-555
Best Of The Doors (Elektra) extra 375-417/376-912
Aretha Franklin—30 Greatest Hits (Atlantic) 350-793/390-799
Van Morrison—Greatest Hits (London) 349-903
The Beach Boys—Made In The U.S.A. (Elektra) 346-445
Bad Company—10 From It (Atlantic) 341-103
A Decade Of Steely Dan (MCA) 341-073
The Cars—Grt. Hits (Elektra) 339-903
The Best Of Kansas (CBS) 327-472
Motorcity Five Hits (MCA) 341-073
Greatest Hits Vol. 2 (Asylum) 378-604
Bob Dylan’s Gt. Hits (Columbia) 378-604
The Best Of Blondie (Chrysalis) 311-811
Journey—Journey’s Greatest Hits (Columbia) 375-279

The Steve Miller Band—Gt. Hits 1974-84 (Capitol) 290-171
Eagles—Gt. Hits, Vols.1 & 2 (At The Fillmore West) 287-003
Bad Company—Bad Company (Atlantic) 291-002
Grace Slick—Singles From The Closet (Warner Bros.) 378-004
The Steve Miller Band—Greatest Hits (Capitol) 354-709
Van Morrison—Greatest Hits (London) 349-903
The Beach Boys—Made In The U.S.A. (Elektra) 346-445
Bad Company—10 From It (Atlantic) 341-103
Grateful Dead—Skele-Tones From The Closet (Elektra) 339-903
The Best Of Kansas (CBS) 327-472
Motorcity Five Hits (MCA) 341-073
Greatest Hits Vol. 2 (Asylum) 378-604
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NEW PRODUCTS

\textbf{\textsc{\small TECHNICS}}

The Technics SA-GX670 A/V receiver features a Dolby Pro Logic decoder, three surround modes, thirty AM/FM presets, a "help" mode for troubleshooting common operating errors, four audio inputs, three video inputs, and a subwoofer output. It's rated to deliver 80 watts each to the left, center, right, and surround channels. The amp section employs several "voltage rails," said to improve efficiency and minimize heat generation. Price: $400. Technics, Dept. SR, One Panasonic Way, Secaucus, NJ 07094.

\textbullet{} Circle 120 on reader service card

\textbf{\textsc{\small KINTEK}}

Designed with home theater in mind, Kintek's Digimate 610 is a modular power amplifier with balanced inputs and six plug-in amp modules, each rated to deliver 125 watts into 8 ohms or 200 watts into 4 ohms. Any pair of modules can be bridged to provide 400 watts into 8 ohms. An overload-protection circuit reduces gain whenever an "excessive signal condition" is detected. Channel separation is given as 90 dB and distortion as 0.08 percent. Price: $2,250. Kintek, Dept. SR, P.O. Box 9143, Waltham, MA 02254-9143.

\textbullet{} Circle 122 on reader service card

\textbf{\textsc{\small SONANCE}}

Designed to be mounted in a wall or ceiling, Sonance's M10RB speaker has a 4-inch dual-cone driver in a 7 1/4-inch-diameter frame with a recessed grille that resembles a lighting fixture. Frequency response is given as 70 Hz to 15 kHz ±3 dB. Price: $155 a pair, including mounting hardware. Sonance, Dept. SR, 961 Calle Negocio, San Clemente, CA 92673.

\textbullet{} Circle 121 on reader service card

\textbf{\textsc{\small SALAMANDER DESIGNS}}

The 36-inch-tall Archetype Rack System from Salamander Designs has five fully adjustable shelves, and it can be expanded with an optional two-shelf extender as shown on left. Price: $199 and up. Available with solid walnut, solid cherry, or black-lacquered wood shelves factory-direct from Salamander Designs, Dept. SR, 1 Linden Place, Hartford, CT 06106.

\textbullet{} Circle 123 on reader service card
**NEW PRODUCTS**

**CD³**
CD³'s Model 401 storage case holds forty CD's. To get a disc out, you align the sliding indicator with the desired slot number and open the case. Price: $30. CD³ Storage Systems, Dept. SR, P.O. Box 1206, Georgetown, TX 78627.

* Circle 124 on reader service card

**JVC**
JVC's KD-GT7 car CD receiver accepts three CD's in a removable cartridge hidden behind its detachable faceplate. It features an AM/FM tuner with twenty-four presets, a bass-boost button, and a four-channel amp rated to deliver 12 watts per channel into 4 ohms. Price: $800. JVC, Dept. SR, 41 Slater Dr., Elmwood Park, NJ 07407.

* Circle 126 on reader service card

**CANTON**
Canton's Combi 24 DC speaker system comprises a pair of 8-inch-tall satellites, each with a 4-inch woofer and 1-inch tweeter, and a 19⅔ x 9 x 12⅔-inch bass module featuring a bandpass design with two 8-inch drivers and dual ports. Bandwidth is given as 22 Hz to 30 kHz. The satellites are finished in black or white satin lacquer, the bass module in black textured vinyl. Price: $995. Canton, Dept. SR, 915 Washington Ave. South, Minneapolis, MN 55415-1245.

* Circle 128 on reader service card

**SOUNDWAVE**
Soundwave's Point Source 3.0 speaker features a five-sided enclosure with two 8-inch woofers and a pair of 1-inch soft-dome tweeters, one at the apex of the cabinet and one on top to add depth to the soundstage. Frequency response is given as 34 Hz to 20 kHz ±3 dB. The 42-inch-tall speaker has an acrylic top panel and is finished in high-gloss black. Price: $2,390 a pair. Soundwave, Vero Research, Dept. SR, 274 N. Goodman, Rochester, NY 14607.

* Circle 127 on reader service card

**PROTON**
Proton's AA-2120 power amplifier is rated to deliver 120 watts per channel into 8 ohms. It features dual-mono construction with a separate power supply for each channel, a tinted-glass front panel with peak-level power meters, and a high-current output section said to be capable of delivering 20 amperes into a 2-ohm load. Distortion is given as 0.01 percent and dynamic headroom as 2.5 dB. Price: $700. Proton, Dept. SR, 16826 Edwards Rd., Cerritos, CA 90701.

* Circle 126 on reader service card
Introducing The Next Best-Selling Loudspeaker Of All Time.

More than 30 years ago, Henry Kloss designed the now-legendary KLH Model Six, the first speaker to fully exploit the potential of two-way design. By using the then-new principle of the acoustic suspension woofer, as well as creating a new type of long-throw integral-dome tweeter, he was able to make a speaker that provided outstanding performance at a moderate cost. A decade later, he took these principles still further with the Advent loudspeaker, one of the best selling speaker models of all time. Both speakers were considered industry benchmarks for price/performance.

We are now pleased to announce Cambridge SoundWorks' Model Six, a two-way system named in honor of Henry Kloss' first ground-breaking two-way system.

Not An "Extension Speaker!"

Model Six is not an "extension speaker." It's a serious main speaker with sufficient frequency range and power-handling to satisfy serious listeners. Model Six speakers, when combined with a good receiver and CD player, comprise a music system for $500 - $600 that seriously outperforms typical pre-packaged "shelf" or "rack" systems.

Two-Way Design Advantages.

We believe that when lowest cost is not the ultimate consideration, the best speaker design is a subwoofer-satellite system like our Ensemble® and Ensemble II systems. But a properly designed subwoofer-satellite system requires three-way design, which entails the cost of two more drivers and a third cabinet. While neither Ensemble system is "high end" in price, it is usually found in speakers of Model Six's size that allows the "long throws" necessary to reproduce music in this range.

Model Six's crossover frequency is 2,000 Hz, much lower than many other two-way designs. This makes it possible to ensure smooth, uncolored upper midrange with wide dispersion. Such a low crossover frequency would not work with conventional tweeters. But Model Six's tweeter uses a suspension integral-dome tweeter, which allows you to optimize performance, with little impact on the decor of your room.

Costly Components.

At the heart of Model Six are its drivers, a 1 3/4" cone tweeter with center ¾" dome (the same tweeter we use in Ensemble), and a newly-designed 8" acoustic suspension woofer. While classic in their simplicity, these drivers differ greatly from other moderate-cost speakers.

Model Six continues a long tradition of best-selling, high performance, high value, two-way speakers by Henry Kloss. Very natural, accurate, wide-range sound—only $119 each!

We believe that when lowest cost is not the ultimate consideration, the best speaker design is a subwoofer-satellite system like our Ensemble® and Ensemble II systems. But a properly designed subwoofer-satellite system requires three-way design, which entails the cost of two more drivers and a third cabinet. While neither Ensemble system is "high end" in price, it is usually found in speakers of Model Six's size that allows the "long throws" necessary to reproduce music in this range.

The 8" woofer cone is larger than those usually found in speakers of Model Six's size and price, allowing it to move substantial amounts of air at low frequencies. And Model Six puts emphasis on very low frequencies instead of the mid-bass "rise" common in many speakers. The result is bass that is more accurate and extended than similar systems.

But most important is how Henry Kloss went on to "voice" the system—painstakingly fine-tuning the octave-to-octave balance. This is the most important factor in determining the overall sound of a speaker.

Elegant Cabinet Design.

We devoted considerable time and effort to making Model Six visually appealing. Convincing simulated wood finishes were chosen—a small rounded "bullnose" molding frames a medium charcoal grey grill that was custom-woven for Model Six.

Factory-Direct Price: $119 each!

Because we sell factory-direct, Model Six sells for far less than it would cost in stores. At $119 each, in your choice of three finishes, it is the value in today's loudspeaker market. If you aren't satisfied, you can return Model Six within 30 days for a full refund.

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CIRCLE NO. 6 ON READER SERVICE CARD
The Critics Love Ensemble And Ensemble II. What's The Difference, Anyway?

Cambridge SoundWorks changed the audio world when we began direct-marketing Ensemble* by Henry Kloss. Ensemble is a revolutionary dual-subwoofer/satellite speaker system offering all-out performance, without cluttering up your room with huge speaker cabinets. Available only factory-direct from Cambridge SoundWorks, with no expensive middle-men, Ensemble is priced at hundreds less than it would have sold for in stores. Audio magazine says Ensemble "may be the best value in the world."

And Then There Were Two.

Now Cambridge SoundWorks has introduced Ensemble II, a more affordable version of Ensemble using only one cabinet to hold both subwoofer drivers. Ensemble II has joined Ensemble in the ranks of the country's best-selling speakers. We believe Ensemble II is a better system than its best-known competitor. And because we sell it factory-direct, it's half the price. Stereo Review said "Ensemble II performs so far beyond its price and size that it can be compared only with much larger speakers at substantially higher prices." We agree with the writer who said, "It's hard to imagine going wrong with Ensemble." The question is, which Ensemble system is right for you?

The Same Satellite Speakers.

When you listen to either Ensemble system, almost 90% of the music you hear is being reproduced by the satellite speakers. Both Ensemble and Ensemble II use satellite speakers that are virtually identical.* Unlike many competing systems, Ensemble's satellites are true two-way speaker systems, each containing a high performance tweeter and a 4-inch woofer. Stereo Review said, "The Ensemble satellites delivered a smoother output than

*Avoid price increase in March.
many larger and more expensive speakers."
Small (8¾" x5½" x4") and unobtrusive, they’ll fit into the decor of any room. They’re available in scratch-resistant gunmetal grey Nextel, or primed so you can paint them any color you wish.

The Same Overall Sound.
In many rooms, Ensemble II sounds virtually the same as Ensemble, especially when Ensemble’s two subwoofers are placed right next to each other. The real difference between the two systems is that Ensemble, with its two ultra-compact subwoofers (12" x21" x4½"), gives you ultimate placement flexibility.

The Same Attention To Detail.
Ensemble and Ensemble II are constructed with the very best materials and no-compromise workmanship. Their subwoofers use heavy-duty woofers in true acoustic suspension enclosures. The satellites are genuine two-way systems with very high quality speaker components. Individual crossover networks are built into every cabinet for maximum wiring flexibility. Robust construction is used throughout, featuring solid MDF cabinets and solid metal grilles.

The Same Factory-Direct Savings.
Cambridge SoundWorks products are available only factory-direct. By eliminating the middle-men, we’re able to sell Ensemble and Ensemble II for hundreds less than if they were sold in stores.

The Same 30-Day Total Satisfaction Guarantee.
Choosing a loudspeaker after a brief listen at a dealer’s showroom is like deciding on a car after one quick trip around the block. So we make it possible to audition our speakers the right way—in your own home. You get to listen for hours without a salesman hovering nearby. If within 30 days you’re not happy, return your speaker system for a full re-

CAMBRIDGE SOUNDWORKS
Loudspeaker systems featuring Ensemble and Ensemble II speakers with Pioneer or Philips electronics start at only $799, including CD player. Dolby Surround Sound systems start at only $999.

The Real Difference: The Ultimate Placement Flexibility Of Dual Subwoofers.
Placement of bass and high-frequency speakers in a room—and how those speakers interact with the acoustics of the room—has more influence on the overall sound quality of a stereo system than just about anything. As an alternative to spending hundreds (or thousands) of dollars on this or that “latest” amplifier or CD player design, you should invest some of your time experimenting with various speaker positioning schemes. Ensemble’s two ultra-slim (4½") subwoofers give you more placement flexibility than any speaker system we know of (including Ensemble II), and is most likely to provide the performance you want in the real world...in your room.

How To Order.
The dual-subwoofer Ensemble system is available in two versions. With handsome black-laminate subwoofers for $599. Or with black vinyl-clad subwoofers for $499. Ensemble II is priced at $399. For more information or to order call our audio experts, 24 hours a day, 365 days a year. We’ll send you our 64 page color catalog with stereo and surround sound components and systems from Cambridge SoundWorks, Pioneer, Philips, Denon and others. Because we sell factory-direct, eliminating expensive middle-men, you can save hundreds of dollars.

For A Free Catalog, Call
1-800-FOR-HIFI
We Know How To Make Loudspeakers.
NEW PRODUCTS

ANVT
Tiny microphones in ANVT's NQ100 Noise Quieting headset convey noise signals to a patented circuit that generates an "anti-wave" said to reduce external noise by 18 dB in the 30-Hz to 1.4-kHz range. The battery-powered headphones are suitable for use with Walkman-type portables in such noisy environments as plane cabins. Price: $189. Active Noise and Vibration Technologies (ANVT), Dept. SR, 4824 S. 40th St., Phoenix, AZ 85040-2940.

KBA
The LS-300 powered speaker system from KBA comprises two 12¼-inch-tall two-way speakers, one of which houses a 10-watt-per-channel stereo amplifier, and a bass module with a built-in 18-watt amplifier. Bandwidth is given as 20 Hz to 10 kHz. Price: $489. KBA, Inc., Dept. SR, 256 Commerce Dr., Suite 471, Peachtree City, GA 30269.

SPECTRUM AUDIO
Spectrum Audio's 14½-inch-tall Model 108c is a ported speaker with one 8-inch coaxial driver. The tweeter's off-center position in front of the woofer is said to improve imaging. Frequency response is 49 Hz to 20 kHz ±4 dB. Price: $349 a pair. Spectrum Audio, Dept. SR, 1021 Nevada St., Toledo, OH 43605.

CASE LOGIC
Case Logic's SkyDisc line of plastic CD racks, featuring hinged doors, includes the 120-disc-capacity SD-120 (shown, $50), the 80-disc-capacity SD-80 ($35), and the 50-disc-capacity SD-50 ($25). Respective heights are 35, 45, and 30 inches. All are finished in satin black with gloss-black doors (the SD-80 and SD-50 have only one door). Case Logic, Dept. SR, 6303 Dry Creek Parkway, Longmont, CO 80503.
Our Center Channel Speakers Deliver Optimum Pro Logic Performance At Factory-Direct Prices.

Cambridge SoundWorks sells two speakers designed by Henry Kloss specifically for use as center channel speakers in Dolby Surround Pro Logic systems—the Center Channel and Center Channel Plus. Our experience with Dolby Surround Pro Logic systems has shown that the center channel is very important. A significant portion of movie soundtracks is directed to the center channel. It’s crucial to use a speaker that reproduces that material accurately, with the proper volume level and dispersion pattern.

**Center Channel by Henry Kloss.**

Center Channel is a compact, two-way acoustic suspension speaker with a 4” woofer and a ring radiator tweeter. Because of its compact size (8¾” x 5¼” x 4”), it’s simple to place Center Channel directly on top of or below your TV screen, so that dialog and sound effects will seem to emanate from their on-screen source.

Center Channel is well shielded magnetically so that it can be placed very close to your TV without causing video interference. Acoustically identical to our Ensemble satellite speakers, it’s ideal for center channel use in a Pro Logic system. The factory-direct price of Center Channel is $149.

**Center Channel Plus by Henry Kloss.**

The Center Channel Plus is a larger speaker recommended for achieving theater-like playback levels in the most sophisticated and powerful home theater systems. It uses four 3” long-throw woofers and a tweeter that perfectly matches the acoustics of our Ensemble® and Ensemble II systems. The frequency range of the outer pair of 3” woofers is intentionally limited to maintain proper dispersion characteristics.

Because of its wide, low profile (25" wide, 4" high, 6½” deep), Center Channel Plus is ideal for placement directly on top of or, uniquely for a product of its type, beneath a TV with optional support unit. It can act as a base for your TV. We don’t know of any speaker, at any price, that outperforms Center Channel Plus. The factory-direct price of Center Channel Plus is $219.

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We Know How To Make Loudspeakers.
NEW PRODUCTS

**T-TECH**
T-Tech's Positiv-I speaker combines an 8-inch woofer, a 5-inch midrange driver, a titanium-composite tweeter, and a defeatable 125-Hz high-pass filter in a 24-inch-tall walnut-veneered cabinet. Its low-frequency limit is 60 Hz. The Positiv-I is available factory-direct for $1,800 a pair. T-Tech, Dept. SR, P.O. Box 151, Hudson, MA 01749.

- Circle 134 on reader service card

**SOUND DECOR**
Sound Decor's Shaker Table is a speaker incognito with a 5¼-inch woofer and a piezoelectric tweeter. Bandwidth is given as 45 Hz to 20 kHz and power-handling capability as 75 watts continuous. The 22-inch-tall table is available in solid maple, solid cherry, or with a hunter-green or satin-black finish. Available factory-direct for $875 a pair. Sound Decor, Dept. SR, 225 Old Oak Dr., Cortland, OH 44410.

- Circle 137 on reader service card

**BGM CONCEPTS**
BGM offers two Novotube CD towers: the 50-disc T-50 (right, $75) and the 144-disc T-144 (left, $199). The plastic units are available in twelve colors. BGM Concepts, Dept. SR, P.O. Box 202902, Austin, TX 78720-2902.

- Circle 135 on reader service card

**DYNACO**
Dynaco's PAS-4 preamplifier uses vacuum tubes in its phono and line stages. It features tape dubbing/monitoring selectors, a mute button, a processor loop, and five inputs. Total harmonic distortion is given as 0.025 percent at 2 volts and gain as 40 dB phono, 18.5 dB line. Price: $898. Dynaco, Dept. SR, 125 Cabot Ct., Hauppauge, NY 11788.

- Circle 136 on reader service card

**BEL CANTO DESIGN**
Bel Canto's Aida is an outboard digital-to-analog converter that features a third-generation sigma-delta conversion chip, proprietary circuitry said to virtually eliminate clock jitter, and both XLR and RCA analog outputs. It is available finished in black, silver, or white with one coaxial and one optical input or two coaxial inputs. Price: $1,900. Bel Canto Design, Dept. SR, P.O. Box 396, Excelsior, MN 55331.

- Circle 138 on reader service card
Blind Melon: "Come On" (Atlantic) 24972

Toni Braxton: "Sash" (MCA) 00877

Liv-Remington: "Bound" (GRP) 01327

Fleetwood Mac: "Greatest Hits" (Warner Bros.) 00719

The Who: "Tommy" (MCA) 03684

Lemonheads: "Come On Feel The Lemonheads" (Atlantic) 01621

Brooks & Dunn: "Hard Workin' Man" (Arista) 00857

Jon Jovi: "Keep The Faith" (Mercury) 00968

Richard Elliot: "Soul Embrace" (Warner Bros.) 00862

The Very Beat Of Yes (Atlantic) 20671

Dr. Dre: "The Chronic" (Interscope) 01241

Nanc Griffith: "Other Voices, Other Rooms" (Warner Bros.) 01362

The Thing Called Love (Giant) 01580

Alan Parsons: "Try Anything Once" (Atlantic) 01196

Aerosmith: "Get A Grip" (Geffen) 20814

Concrete Blonde: "Mexican Moon" (Capitol) 25333

Jackson Browne: "I'm Alive" (Epic) 25039

TalkTalk: "Spawning In Tongues" (Sire) 01421

Michael Franks: "Dragonfly Summer" (GRP) 01427

Dave Matthews Band: "Don't Smoke In Bed" (Warner Bros.) 01394

Holly Cole: "Your Call" (MCA) 00422

Reba McEntire: "It's Your Call" (Warner Bros.) 01165

Alan Jackson: "A Lot About Love" (Atlantic) 20566

Duran Duran: "Greatest Hits Volume 2" (Warner Bros.) 03456

Kiss: "Alive" (Jive) 01519

Creedence Clearwater Revival: "Chronicle 20 Greatest Hits" (Fantasy) 01520

Michael Jackson: "The Ultimate Experience" (MCA) 01527

Van Halen: "Right Here, Right Now" (Warner Bros.) 01165

Jazzy Jett: "The Fresh Prince Of Bel-Air" (Jive) 01595

Williams: "The Very Best Of The Bostons Pops" (Philips) 15319

Kronos Quartet: "Gorecki, String Quartets 1 & 2 (Nonesuch) 15563

Prince: "The Hits 1" (Warner Bros.) 02228

Prince: "The Hits 2" (Warner Bros.) 02229

Nirvana: "Nevermind" (Geffen) 15600

Vince Gill: "Still Believe In You" (Warner Bros.) 20461

Conway Twitty: "Final Touches" (MCA) 20462

Jazzercise: "Greatest Hits" (Polydor) 23385

The Eagles: "Greatest Hits" (MCA) 11136

Eric Clapton: "Unplugged" (Polydor) 23960

Eric Clapton: "Unplugged" (Warner Bros.) 23960

Joe: "Everything" (Mercury) 35373

Salon Kirk: "Winds of Change" (Third) 20924

Foreigner: "The Very Best...And Beyond" (Atlantic) 24722

Zappa & Rog: "All The Greatest Hits" (Reprise) 80232
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   - If the reply card is missing, please write to: BMG Direct, P.O. Box 91300, Indianapolis, IN 46291-0300

2. **Choose your selections:**
   - From day one, you’re encouraged to buy a CD at half price every time you buy one of the regular Club price.
   - With other clubs, usually you must first buy 6 or more at full price to qualify for extra savings.

3. **Save with Instant Bonuses:**
   - From day one, every time you buy one CD at the regular Club price, you’re entitled to buy another one of equal or lesser value at half price. And the savings don’t stop there!

4. **Save with the Featured Selection:**
   - That’s a total of 8 for the price of 1, plus shipping and handling for each selection. Best of all, you have a full year to buy your selection. It’s that easy!

5. **Choose your own music:**
   - You may return any or all selections at any time, for any reason, and the savings continue as long as you’re satisfied with the Club.

6. **More reasons to join:**
   - With this service, you’ll receive your Club Catalogs filled with hundreds of choices, plus a Featured Selection from your preferred music category.
   - If you want the Featured Selection, do nothing. It will be sent to you automatically.
   - If you prefer an alternate selection from the catalog, or none at all, simply return the Notification Card, enclosed with each issue of your catalog, by the date specified.

7. **Cancel your membership:**
   - We give you at least 10 days to return the Notification Card. If you end up with less time and, as a result, pay more than the regular Club price, you’re entitled to return some or all of the Club’s selection.

8. **Complete club details:**
   - About every three weeks (19 times a year), you’ll receive a Club Catalog.
   - If you end up with less time and, as a result, pay more than the regular Club price, you’re entitled to return some or all of the Club’s selection.

9. **Customer service:**
   - If you want features, see page 4.
   - If you prefer an alternate selection from the catalog, or none at all, simply return the Notification Card, enclosed with each issue of your catalog, by the date specified.

10. **Refund guarantee:**
    - We give you at least 10 days to return the Notification Card. If you end up with less time and, as a result, pay more than the regular Club price, you’re entitled to return some or all of the Club’s selection.

11. **Additional benefits:**
    - With this service, you’ll receive your Club Catalogs filled with hundreds of choices, plus a Featured Selection from your preferred music category.
    - If you want the Featured Selection, do nothing. It will be sent to you automatically.
    - If you prefer an alternate selection from the catalog, or none at all, simply return the Notification Card, enclosed with each issue of your catalog, by the date specified.

12. **About the Club:**
    - About every three weeks (19 times a year), you’ll receive a Club Catalog.
    - If you end up with less time and, as a result, pay more than the regular Club price, you’re entitled to return some or all of the Club’s selection.

13. **Customer service:**
    - If you want features, see page 4.
    - If you prefer an alternate selection from the catalog, or none at all, simply return the Notification Card, enclosed with each issue of your catalog, by the date specified.

14. **Refund guarantee:**
    - We give you at least 10 days to return the Notification Card. If you end up with less time and, as a result, pay more than the regular Club price, you’re entitled to return some or all of the Club’s selection.

15. **About the Club:**
    - About every three weeks (19 times a year), you’ll receive a Club Catalog.
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16. **Customer service:**
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17. **Refund guarantee:**
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30. **About the Club:**
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    - If you end up with less time and, as a result, pay more than the regular Club price, you’re entitled to return some or all of the Club’s selection.

31. **Customer service:**
    - If you want features, see page 4.
    - If you prefer an alternate selection from the catalog, or none at all, simply return the Notification Card, enclosed with each issue of your catalog, by the date specified.

32. **Refund guarantee:**
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Pony Car

When Henry Ford built his first gasoline-powered car in 1896 he envisioned it as transportation for the masses. True to his dream, he soon went on to invent mass production (an innovation that was even more important than the car) so that his company could make its cars affordable. More specifically, Ford manufactured one kind of car—the Model T. It was designed to be an everyman, one-size-fits-all vehicle. Ford mixed specialty attachments because they would only have increased the cost and probably defeated the entire concept. In a legendary summation of his philosophy, Henry Ford proclaimed that customers could have a Model T in any color they wanted, as long as it was black. Options were the last thing on his mind. The idea of car sound systems probably never occurred to him.

In April 1964, at the New York World’s Fair, the Ford Motor Company introduced a sporty little car called the Mustang. Its styling was distinctive: long hood, short hopped-up rear deck, scoops on the sides, and a galloping pony on the grille. Its base six-cylinder engine supplied a modest 101 horsepower, but an optional V-8 engine ipped that to 164 horsepower. Unlike the Model T, the Mustang came in a variety of colors, including such 1960’s favorites as poppy red, sunlight yellow, and sky blue. In terms of its sound system, the car was primitive (as were most cars in those days). The $2,368 base price did not even include a radio. Two audio options were available: You could get a pushbutton radio with an antenna and a dash speaker, or you could enhance that package by adding a rear speaker. High-tech audio features like cassette players were still years away.

The Mustang was an instant hit among Baby Boomers, who were starting to get their driver’s licenses. A savvy restaurateur advertised that his hotcakes were “selling like Mustangs.” A Chicago dealer called the police when customers stormed his showroom. Ford’s twelve-month sales estimate of 100,000 was achieved in four months, and the “pony car” went on to break the record for first-year car sales with a total of 417,000. Mustang-frenzied parents even purchased 93,000 pedal-powered mini-Mustangs during the 1964 Christmas season.

Today, 6.1 million Mustangs later, the Mustang is celebrating its thirtieth birthday with a complete redesign—the first significant makeover in well over a decade. The new car—which represents a $700 million effort—is pure Mustang, combining contemporary engineering with its design heritage. The base car, either coupe or convertible, is a V-6 with 145 horsepower, but there is also a V-8 model with 215 horsepower, and a 240-horsepower Cobra model will be available this spring.

Of course, the sound system is light years beyond the 1964 offering. The standard package includes a stereo AM/FM radio with 24 watts of maximum power and four speakers. But it’s the new Mustang’s audio options that really demonstrate just how far car audio has come over the last thirty years. The Mach 460 system ($670) boasts a feature-packed cassette tuner, eight speakers, and six channels of amplification. Four of the amplifiers, each rated to deliver 15 watts continuous with no more than 2 percent distortion, drive four 2½-inch midrange-tweeters mounted in ½-liter enclosures—two in the sail panels (where the outside mirrors attach) and two in the rear package tray (in the coupe) or rear quarter panels (in the convertible). Each amp channel has two bands of fixed equalization and uses voltage limiting to restrict distortion at high volume levels.

The system also sports four woofers. Coupes have 5 ½ x 7 ½-inch woofers—two in the front doors and two in a rear-deck-mounted 15-liter enclosure; convertibles replace the rear pair with two 5 ½-inch woofers in the quarter panels. The woofers are powered by a pair of 85-watt, voltage-limiting amps with one band of fixed equalization. Overall, the system pumps out 230 watts of continuous power, 460 watts peak.

If you want more, the Mach 460 system can also be fitted with an in-dash CD player for an additional $475; it mounts just below the cassette tuner. Still not satisfied? You can have the dealer install a ten-disc CD changer for another $500 or so. Not quite cutting-edge enough for you? Get a MiniDisc player instead of the CD tuner for about $700. In fact, the Mustang is the first car sold in America that can be fitted with a factory-authorized, dealer-installed MD player. The Sony-built DIN-size unit features a twelve-character display that scrolls disc and track titles and a 4-megabyte buffer memory that holds 10 seconds of audio data, insuring uninterrupted playback no matter how hard you’re pushing your pony.

Imagine what Henry Ford would say if he returned for a look at the new Mustang. Certainly its engineering sophistication would astonish him. The Mach 460 sound system would probably mystify him. But, after a few minutes of contemplation, he’d probably vault into a convertible and take off. A black one, of course.
Future Shock?

Q I'm in the market for an A/V system, but I'm worried that anything I buy today will be obsolete tomorrow. Will today's components be able to process things like digital radio? Will today's VCR's be able to handle high-definition TV? Or will we eventually have to scrap what we're buying now? If so, if I decide to wait for tomorrow's technology, how long will it take?

A The old crystal ball is a bit cloudy on the specifics, but I think it's fair to assume that the technological development will never be finished, so if you hold out for the ultimate expression of home entertainment equipment you could wait forever. But most change in this field builds on what already exists, so even though things like digital radio may require that you buy a new piece of equipment to receive it, the amplifier and speakers you buy today will be able to handle the new signal source. And though today's VCR's will definitely be incapable of handling high-definition TV, that's still a long way off; even if a standard were set tomorrow, it would still be years before programming became plentiful and prices dropped within the reach of the average consumer. In the meantime, why deny yourself what's available today?

Light on the Subject

Q When I close the door on the tape well of my cassette deck, the light inside goes out. It usually reappears when I press a function button and then fluctuates in this way several times as I use the machine. The deck seems to record and play normally, whether the light is on or off, but I'm concerned that performance may be affected. What's causing the problem, and can it be repaired inexpensively?

A It's probably nothing more than a loose connection, and since it doesn't seem to affect your recordings, I wouldn't worry about it. If the fault results in clicks in the audio signal, or if you really must be able to see where you are in a cassette, the problem should be easy to fix.

dbx Tapes

Q I put together my system about ten years ago and included both cassette and open-reel tape decks with dbx noise reduction. Until I switched to CD's some years later, almost all my music was recorded on tape using dbx. I maintain all of my components carefully, but if my tape decks begin to deteriorate, what are the chances of obtaining parts so I can continue to enjoy my encoded tapes?

A Not too good, I'm afraid, at least as far as the dbx circuitry is concerned, but fortunately that's not likely to fail. More delicate are the heads and the mechanical parts of your recorders, and these should be easier to replace. You might consider spending a few bucks now to have the manufacturer bring your tape decks up to spec and replace anything that's worn. That should insure at least as many years of good performance as you've already had, as long as you continue your careful maintenance regimen. I have recorders more than twenty years old that are still going strong.

Cassette Settings

Q I have a cassette deck with dual transports, but it has only one setting for oxide type. Is it possible to dub from a normal (Type I) tape to a Type II cassette with my machine, or is it even advisable to use a Type II tape in it?

A If there are no bias or equalization options, your deck is set up for "normal" ferric-oxide (Type I) tape. You can use Type II (high-bias) tape in it, but audio quality will be compromised. If, for example, you wish to copy a Type II tape to Type I, the playback equalization for the original will be wrong, and the sound will be somewhat bright (which may be pleasant but is inaccurate). If you copy a Type I tape to Type II, the latter will be underbiased, which will also result in high-frequency emphasis as well as increased distortion and reduced midrange headroom. Again, it may sound okay, but if you combine the two effects—Type II to Type II—the result would probably be unbearable. In any event, experiment to see what happens.

Subrumble

Q I do my listening in a special music room in the basement with double walls, ceiling, and insulation. The music is played on a high-quality stereo setup with DSP ambience enhancement. When I added a powered subwoofer several years ago, I noticed that with some CD's a low-frequency thump or rumble would creep into the music now and then. At first I thought it was someone walking across the floor up-
stairs, but as soon as I switched out the subwoofer the sound—almost a feeling—would stop. I couldn't seem to isolate the piece of equipment where the problem originated, and then I heard it on a recording played on FM. I have since heard it on other selections played by the same station. I'm at my wits' end—is there something wrong with my system?

JOHN D. RAHOY
St. Louis, MO

I doubt it very much. I suspect you are hearing what a lot of new subwoofer owners notice, especially if they listen mostly to classical music: low-frequency noise on the recordings themselves. Many recordings are made in actual concert halls, even if no audience is present, and few of these are truly isolated from certain types of external noise, notably traffic rumble and air-conditioning sounds. In lots of cases, especially in old recordings, the engineers didn't know the sounds were there because their monitor speakers couldn't reproduce them. It may be cold comfort, but it's not at all uncommon for home stereo equipment like yours to have better performance than professional gear, particularly at the frequency extremes. About the only thing you can do is to roll off the bass or turn off the subwoofer when it happens. Or leave it there and appreciate the realism of it all.

Double-Duty Amplifier

Q My Dolby Pro Logic decoder provides a single center-channel line output and a single subwoofer output. Could I use an ordinary stereo amplifier to drive a center speaker and a subwoofer? If so, would it provide adequate channel separation?

JOE MORGAN
Kuwait City

As long as the amplifier has enough power to drive the subwoofer without distress, you should have no problem. Channel separation should be much more than enough.

Out-of-Phase Surround

Q I have noticed that some surround speakers use dual drivers wired out of phase to achieve a nondirectional ambient sound. Does this technique provide any advantage over conventional speakers? And if it does, could I accomplish the same thing by wiring my two conventional surround speakers out of phase with one another?

KELLY MURLEY
Commerce Township, MI

One of the aims of a surround system is to create a sound field that seems to envelop you without your being aware of the side or rear speakers as distinct sound sources. This effect can be enhanced by speaker placement or design.

A number of manufacturers, including all who produce Home THX-certified speakers, employ a quasi-dipole design for the surround channel, in which two drivers are placed back-to-back and wired out of phase with one another. Like a true dipole (a single diaphragm radiating front and back), this arrangement creates a figure-eight radiation pattern, with most of the sound being directed forward and backward, relatively little to the sides. If the speakers are positioned so that the side "nulls" are aimed toward the prime listening area, the direct sound from them will be much weaker than the sound reflected off the walls and ceiling, making localization unlikely. It's only one technique for making the surround sound as diffuse as it should be, and it works only because the drivers are close together. Simply wiring a pair of conventional speakers on opposite sides of the room out of phase would not produce the same effect.

If you have a question about audio, send it to Q&A, Stereo Review, 1633 Broadway, New York, NY 10019. Sorry, only questions chosen for publication can be answered.
MUSIC MAKERS

TWO TO TANGLEWOOD
Pianist Judith Lynn Stillman, the youngest musician ever to be admitted to the Juilliard School's doctoral program, is a frequent guest at music festivals. It was at Tanglewood, the renowned summer home of the Boston Symphony in the Berkshires, that she first met trumpet player Wynton Marsalis, who later became one of her students at Juilliard. They recently collaborated on their first recording, a collection of modern works for trumpet and piano titled "On the Twentieth Century." The Sony Classical CD includes works by Bernstein, Ravel, Poulenc, and Hindemith.

STRANGE BEDFELLOWS
Apparently music—as well as politics—makes strange bedfellows. Case in point: the debut album by Nashville’s The Bis-Quits (the first rock band signed to folkie John Prine’s Oh Boy label). Amidst brilliant originals like Tennessee Valley Girl and an inspired cover of Richard Thompson’s Walking on a Wire, we discovered a rocker entitled Yo-Yo Ma, which turns out to be nothing less than a rewrite of Johnny B Goode in honor of the classical cellist. The genesis of this unlikely tribute? “We used to do a thing at rehearsals called the Rockabilly Challenge,” the Bis-Quits’ leader/guitarist Will Kimbrough told us. “Somebody would call out a song—any song—and we’d have to do it rockabilly style. And one time I just started singing about Yo-Yo Ma. I mean, it’s a great name, and I had heard him on NPR and thought he was great. Besides—‘Leonard Rose’ just doesn’t swing.”

AND THIS JUST IN FROM METROPOLIS...
Good news for folks who find TV’s Lois and Clark: The New Adventures of Superman a little too sweetly romantic compared with the Man of Steel’s comic-book adventures. Time Warner AudioBooks has released “Superman Lives!,” a 2½-hour cassette extravaganza (Dolby Surround, original orchestral score) inspired by last year’s Death of Superman comics saga. Unlike the network version, this aural incarnation of the Caped Kryptonian (originally produced by the BBC) has all the superheroic ultraviolence you could want, quite realistically conjured. How the tape will play to a generation for whom radio drama is a quaint form of nostalgia remains to be seen, of course, but Time Warner may be onto something—at last count the Death of Superman comics had sold upwards of 25 million copies.

MUSICAL MUSCLE
Pianist Tizimon Barto’s bare-chested publicity photos and good looks may have attracted attention in a few places where classical music is rarely noticed, but ultimately it was the quality of his recordings that established him as a contender in the arena of young classical musicians. His latest recording, "Popular Encores," was set for release by EMI Classics in February.
The purity of separates. From the passion of Carver.

The Carver name evokes an almost mystical following among serious music lovers. And justly so. Carver power amplifiers have generated critical acclaim year after year, model after model, with one – the TFM-35 – universally acknowledged as “one of the best audio amplifier values in the world.” Upgraded to the TFM-35x, with high fidelity enhancements so advanced, it also exceeded the strict specifications of THX home theater.

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CARVER
Powerful • Musical • Accurate
DANCING WITH THEMSELVES

In case you hadn’t noticed, the punk revival is definitely upon us. Safety pins and “ripped” T-shirts are haute couture, there’s a new album by the Buzzcocks, Guns n’ Roses has released cover versions of songs by punk progenitors, and Generation X—1976’s pretty-boy alternative to the Sex Pistols—got together for a one-shot reunion. Appearing unannounced after a solo show promoting former Gen X leader Billy Idol’s current “Cyberpunk” album at London’s Astoria club, the foursome roared through such spike-haired classics as Ready Steady Go and Your Generation to the delight of an aging (but still pogoing) crowd. “In retrospect, Generation X was such a great group,” bassist Tony James commented afterwards. “It was like being in the Who.”

BUT IT’S NOT IN ODORAMA

If you’re considering buying “Road Kill,” the new video collection by heavy-metal bad boys Skid Row—and is there anyone among us who isn’t considering it?—be advised that it comes with an interesting bonus. Along with the usual concert footage and backstage antics, the video (on A*Vision, VHS or laserdisc) features a clip of Psycho Love in astonishingly realistic 3-D (no kidding—we checked it out for ourselves). Fortunately, two pairs of 3-D glasses are included, so that, in the words of navel-baring Skid Row frontman Sebastian Bach “no one has to watch it alone.”

CARLY’S OPERA DEBUT

As a child Carly Simon saw enough at the Metropolitan Opera, thanks to her well-intentioned parents, to steer her far away from Wagner and Verdi and toward one of the legendary careers in pop music. Still, at forty-seven Simon retained enough fondness for the Met to create words and music for a children’s opera, Romulus Hunt, commissioned by the Metropolitan Opera Guild. After well-received performances last year at New York’s Lincoln Center and Washington’s Kennedy Center, it was recorded by EMI’s Angel Records and is now available in record stores. Plans are in the works for more staged productions across the country. Watch for it, and take the kids.
In a movie theater, the speaker you never see is the center channel. That's because it's located directly behind the screen, so dialogue sounds as if it's coming directly from the actor's mouths. Although movie screens have tiny holes in them to allow the soundtrack to pass into the theater, the screen material absorbs so much high frequency information that filmmakers are forced to boost the treble content of the soundtrack. Unfortunately, when a film is transferred to videotape or laserdisc, this high frequency boost remains, resulting in dialogue that is unnaturally harsh and much too "up front" for home theater. While most speaker manufacturers design their center channel systems acoustically flat—a noble goal, they completely ignore the question of overly bright dialogue reproduction.

To overcome this problem, Atlantic Technology's Model 153 C Center Channel Speaker gently rolls off the high frequencies for smooth reproduction of center channel dialogue information. When designing the 153 C, our R&D team spent countless hours listening to a wide variety of film and television soundtracks. These tests allowed us to perfectly tune the Model 153 C for extended listening, without the brittle, misdirected and harsh sound often associated with center channel loudspeakers. The result is rich, natural sounding vocal reproduction. Simply put, the right tone of voice.

At Atlantic Technology we specialize in home theater. We listen to our customers and to movies with equal excitement, then deliver components that are as much about value as they are about performance. That's why Video Magazine said "In its price range, Atlantic Technology is currently very hard—if not impossible—to beat." Call 617-762-6300 and refer to Dept. A for more information and the name of your nearest Atlantic Technology dealer.
Tuner Tests

A convenient music source for many people, FM radio at its best delivers truly excellent sound quality. Unfortunately, its ultimate performance is usually compromised by such problems as multipath interference, inadequate signal strength, interference from local sources of radio-frequency (RF) noise or from other stations, and signal processing (such as compression) purposely applied by the broadcaster for various reasons, as well as by tuner imperfections.

As with amplifiers, there is a comprehensive Electronics Industry Association (EIA) standard for testing FM tuners: IEEE Standard 185-1975 (now in the process of being updated) covers virtually every aspect of performance. Some of its tests are of limited value (notably the misnamed “usable sensitivity,” generally regarded as an unusable-sensitivity rating, since a signal of the specified level would indeed be unlistenable) or obsolete, but many others are still quite useful.

Among the most important measurements, which we make on every tuner and receiver, are 50-dB quieting sensitivity (the input required for a fully modulated signal to produce an audio output 50 dB greater than the tuner's noise output with an unmodulated signal). This measurement applies to both stereo and mono reception and roughly defines the weakest signal that provides useful reception. High sensitivity (a low number) is important if you want to listen to a faraway station or have a poor antenna; in a strong-signal area, however, it may be not only unimportant but even undesirable. Poorly designed tuners can easily be overloaded by strong signals, creating distortion or spurious responses at other frequencies. In such cases it may actually be necessary to attenuate the input to the antenna terminals.

Frequency response is seldom a major concern, since most are flat within a decibel or two up to the 15-kHz limit of FM transmission. However, distortion readings, though important, can be misleading, because what is measured as “distortion” (especially in stereo) often consists mainly of spurious signals outside the audible frequency range rather than harmonics of the modulating signal. These may indeed be audible under certain conditions, but not in the same way as conventional audio distortion.

Channel separation is a standard measurement, but unless it is very poor (less than 20 dB or so), you probably will get as good a stereo image as the program itself can deliver. Image response—interference from signals 21.4 MHz above the FM channel—can be important if you live close to a busy airport, where aircraft communications with the control tower might blot out some FM stations on a tuner with a low image-response ratio.

Capture ratio (a measure of a tuner’s ability to reject the weaker of two signals on the same frequency) and AM rejection can be very important in fending off the ill effects of multipath. A common, often severe reception problem, especially in cities, multipath occurs when a broadcast signal and one or more very slightly delayed reflections of it from buildings or other features of the local terrain are all picked up by the same antenna. For minimum distortion in such situations, capture ratio should be low (preferably close to 1.0 dB) and AM rejection high (up around 70 or 80 dB).

Not every test we perform is of equal importance to every listener, but most of them do help to define a good or not-so-good tuner. Excellent tuners are available at relatively affordable prices ($400 to $600), and highly sat-
What If Cassette's Weren't Cassette's?
You Could Find a Song in a Second.

Ever try searching for a song on cassettes? You could grow old waiting for the tape to wind its way through the player. It makes you wonder why they ever called it "fast forward!"

But now there's MiniDisc—the ultra-miniature music carrier that's personal and portable. MD uses laser optical technology to find your music instantly and precisely. So no matter where your favorite songs are located, you'll never play that old waiting game again.
Amazingly portable, the MZ-E2 MD Walkman Player is about as small as a cassette box. It weighs just 7-1/9 ounces and can operate up to 7-1/2 hours on batteries. Bringing the power of MiniDisc performance to all of your on-the-go activities.

You Could Carry a Lot More Tunes.

If you think cassettes when you think of portability, think again. Thanks to the digital magic of MiniDisc, your albums are smaller, lighter and more mobile than ever before. In fact, you can store nearly four MiniDiscs in the space of one cassette.

And there are hundreds of great albums on MiniDisc. From labels like Atlantic, BIS, Capitol, Capriccio, Chrysalis, Columbia, DMP, Elektra, EMI, Epic, Liberty, Reprise, Rykodisc, SBK, Sony Classical, Virgin and Warner.
You Could Listen For a Lifetime.

While you may love to jam with your music, you don't want your music to jam. Or stretch. Or wear out due to constant use.

MiniDisc has a better way. Each album comes in its own special cartridge that protects against fingerprints, scratches and abuse. And MiniDiscs play without contact, so the discs never wear. What's more, all MiniDisc players feature electronic shock protection. So even if you encounter some bumps in the road, your music shouldn't skip a beat.

You Could Enjoy Music Non-Stop.

When it comes to getting into music, nobody "flips" over cassettes. Because flipping from Side A to Side B has to be one of the least loved rituals around. Even auto reverse players interrupt the music enough to ruin the rhythm.

With MiniDisc, there's never any interruption to slow you down. You get up to 74 minutes of continuous music on each album. And if that's not enough, our car MD Changer can carry four MiniDiscs at a time, for nearly 5 hours of entertainment.
Why be limited to one cassette when you can play your MiniDiscs? The Sony MDX-400 Car MD Changer is an in-dash audio unit that comes with an easy-to-load 4-disc magazine. There's also AM/FM diversity tuning, a rotatory remote and detachable face security. The MDX-400 can even control an optional Sony Unit link™ CD changer or digital preamp.
You Could Record as Never Before.

It takes a lot of effort to record on cassettes. First you have to plan your music program. Then you have to determine if you have enough tape. And if you ever want to replace a song, you might as well start all over again.

MiniDisc makes it easy. You can resequence songs at the touch of a button. If you erase a track, all subsequent tracks are instantly renumbered. And if you have to replace a track with a longer song, the MiniDisc recorder will automatically find the right space on the disc. In fact, a MiniDisc can be recorded and re-recorded more than a million times, without any loss in sound quality. Making it the ideal digital disc for the mixes you make.*

The Ultimate Cassette™ is a MiniDisc.


And only Sony offers such a wide variety of MiniDisc products. In addition to the models shown, there's an MD Walkman Recorder. A car in-dash MD Receiver. An MD Mini Component Deck. A complete MD Tabletop Music System. And both 60 and 74 minute MD Recordable Discs.

So if you're considering the ultimate cassette system for the future, guess what? The future isn't a cassette. It's a MiniDisc.
Sony's MDS-501 MiniDisc recorder complements any hi-fi component system. It offers great sound and important editing functions like Erase, Move, Divide and Combine. There's also a unique Multi Jog Dial for quick access to any track.

For the ultimate in recording convenience, record on a Sony MiniDisc. Our MDW-74 disk uses incredible magnetic technology to make recording incredibly easy. A tough, ultrasonically welded shell protects your music from daily abuse while a safety tab prevents accidental erasure. And the supplied adhesive labels make it simple to ID your MD.
The slow but steady seep of video capabilities into traditional audio components is no better exemplified than by the CX-2, Yamaha's next-to-the-top separate preamplifier. It provides not only connections and switching for the audio outputs of a videodisc player and two VCR's, but also for both composite-video and S-video signals from such devices. Audio-only connections are provided for a CD player, a moving-magnet (MM) or moving-coil (MC) phono cartridge, a tuner, and two audio recorders.

Apart from the video switching, the CX-2 is a fairly basic, though not minimalist, preamp. Most of its features are controlled by knobs and switches hidden behind a flip-down front-panel door. There are knobs for bass, treble, channel balance, and loudness compensation, a switch labeled Pure Direct that routes the audio around those circuits, an independent recording-source selector, and an infrasonic-filter switch effective only on the phono input. There are three front-panel indicator lights, for power, Pure Direct, and muting (a 20-dB reduction of output level switched from the supplied infrared remote).

Similarly straightforward, the CX-2's back panel has horizontally arrayed input jacks, enabling easy access by feel from the front. The video jacks for A/V components are segregated from the corresponding audio jacks, a minor inconvenience, but the layout makes for a low-profile enclosure. Also on the back panel are three switched AC outlets (maximum 200 watts total), a push switch for selecting moving-coil or moving-magnet operation of the phono section, and a muting-control jack that connects via a supplied cable to Yamaha's MX-1 and MX-2 power amplifiers. The CX-2's programmable, multicomponent remote control switches power, selects sources, activates muting, and raises or lowers the volume. Most of the handset's numerous buttons are devoted to the functions of other components (CD player, tuner, and so forth). That's about it for features.

Performance is something else again. Our test results tell only part of the technical story, which can be summarized easily: The Yamaha CX-2 was a superb performer in every significant respect.

The tone controls proved to be unusual. Used alone, the bass knob had a very wideband effect, extending into the low treble even at moderate settings (between 9 and 3 o'clock). But when I turned the treble control to approximately the same setting as the bass control, the bass circuit's high-frequency effects were partially canceled. Turning both tone controls to the same setting gave the effect of a graphic equalizer adjusted for a broad boost (both controls turned down) or dip (both controls turned up) centered at approximately 2 kHz (the "presence" range).
The action of the infrasonic filter was, in fact, confined to infrasonic frequencies, although it would be more beneficial if its rolloff started higher, up in the audio range (or, better, if it had a steeper slope), and if the filter applied to all inputs, not just phono. The loudness-compensation system requires you to set the maximum playback level with the volume control and then reduce the volume using the loudness knob, which progressively applies a bass boost and a smaller treble boost as the level is lowered. As these things go, it is a superior approach now rarely used. The Pure Direct switch produced no reliably measurable differences in performance. Then again, in some categories the CX-2's measured performance with Pure Direct switched off already approached the performance limits of the Audio Precision test equipment we use.

The one very minor anomaly we found was leakage of power-line hum and its harmonics into the signal from 60 Hz up to around 1.5 kHz. But the hum components were all at least 91 dB below the reference output level of 0.5 volt, thus quite a bit below the threshold of audibility in typical setups. I certainly never heard them. Moreover, at frequencies above 2 kHz, where the ear is most sensitive to noise, the CX-2 was considerably quieter than a theoretically perfect CD player playing a theoretically perfect recording. Indeed, the CX-2's hiss levels were lower than one could obtain from a theoretically perfect 18-bit CD, if there were such a thing. Few other preamps are that quiet. The CX-2 is about as digital-ready as it is possible to be.

Its video-readiness is more limited, although the video-switching circuitry was admirably clean and neutral in operation. The CX-2 contains no surround-sound decoder and has no specific provisions for hooking up a decoder's multiple outputs. On the other hand, such features would add cost and complexity that many potential users might not want. The CX-2's video capabilities will be most useful in A/V systems that already have a VCR and a surround-sound system, or in systems that incorporate an outboard surround processor with a master volume control for all channels but no A/V switching capability. Even if you don't need the video switching, it adds little to the CX-2's very reasonable price and does nothing to diminish its superb performance as an audio preamp.
"Bipolar Systems are as Close as We've Come to Finding the Holy Grail of Home Theater."

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The Ultimate Home Theater
Combine the BP8s, 10s, or 20s with our C/L/R 1000 or C1 center channel and BP2 bipolar surround speakers for the ultimate in home theater sound.

Visit your nearest Definitive dealer and experience the absolute sonic superiority of these truly extraordinary VIVA Gold Product-of-the-Year, Audio Video Grand Prix and CES Design & Engineering Award winning loudspeakers.

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BP10 - $550 ea. BP8 - $399 ea.
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CIRCLE NO. 15 ON READER SERVICE CARD
A few years ago we reviewed the original Bose Lifestyle music system—an unconventional product designed to simplify the installation and operation of a multizone music system. It used a three-piece Acoustimass speaker system with the familiar Bose "cube" satellite speakers and a separate bass module that also contained power amplifiers and electronic crossovers for the entire system. The heart of the system was the Music Center, an unobtrusive shelf-top unit combining an AM/FM tuner and CD player with the necessary system controls in an attractive and remarkably compact form. The Music Center was capable of driving an essentially unlimited number of powered loudspeakers, which could be organized into two zones for independent, simultaneous playback of separate program sources (such as radio and CD). Another unusual feature was the system's remote control, which used radio waves to transmit commands to the Music Center. This enabled operation of the Lifestyle system from any room, or even from outside the house, without the line-of-sight path to the handset that would be required for conventional infrared remote control.

Bose has since expanded its Lifestyle line to three models, including an upgraded version of the original system, now called the Lifestyle 10, with improved speakers. Completely new are the lower-price Lifestyle 5 reviewed here and the Lifestyle 3, both based on the somewhat smaller, single-zone Lifestyle 5 Music Center. The Lifestyle 3 includes Bose's Powered Acoustimass 3 Series II three-piece loudspeaker system, whereas the Lifestyle 5 comes with the same Powered Acoustimass 5 Series II speaker system as the top-of-the-line Lifestyle 10. The Series II satellites are appreciably smaller than in the earlier version but retain the pivoting feature that enables the upper and lower cubes of each satellite to be aimed in different directions for best control of the sound's spatial distribution. Each cube contains a single 2 1/2-inch cone tweeter. The bass module, which formerly used a pair of 6-inch drivers, now has a single 8-inch driver in its dual-chamber Bose Acoustimass enclosure.

The Powered Acoustimass 5 Series II speaker system (which is also available separately) has three power amplifiers in its bass module, with a total rating of 200 watts. A 100-watt amplifier drives the woofer, and there are separate 50-watt amplifiers for the satellites. The bass module also contains the electronic crossover circuits and level adjustments for the bass and treble ranges, used for balancing the relative levels of the woofer and satellites as required by their placement in the room. The speaker system's electronics turn themselves on automatically when a signal is detected and off automatically after a period of silence.

The Lifestyle 5 Music Center appears very similar to the original model (now called the Lifestyle 10 Music Center). It contains a CD player and AM/FM tuner and on the rear has three sets of line-level inputs labeled auxiliary, video, and tape. All essential control buttons are accessible in a window on the Music Center's top surface as well as on the remote hand-
Definitive’s Award-Winning Center Channels and Bipolar Surround Speakers for Your Ultimate Home Theater

Absolute sonic superiority and unequalled value make Definitive loudspeakers your obvious choice.

Enthusiasts and world renowned experts acknowledge the dramatic sonic superiority of Definitive loudspeakers for both the superb reproduction of music and the dramatic special effects and dialogue of home theater surround sound.

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Optimum surround sound reproduction places heavy demands on the center speaker, the most important speaker because it handles 50% or more of the program material. It is no place to settle for second best. Definitive’s C/L/R 1000 and C1 are the finest shielded, low profile, high resolution center channel/main speakers available. They use superior state-of-the-art components and technology for extraordinary ultra high definition articulate clarity and high power handling (C/L/R 1000: 300 watts, C1: 200 watts).

The BP2’s Bipolar Advantage

BP2s are unique ultra compact high resolution bipolar (front and rear radiating) systems intended primarily for use on the rear/side surround channels of the finest home theater systems. Experts agree that Definitive’s bipolars provide a perfectly diffuse sound source which is ideal for these applications.

The use of BP2s results in a much more lifelike, dramatic all-enveloping listening experience than is possible with conventional speakers. In addition, because of their superb performance characteristics, the BP2s also make exceptional main channel speakers.

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Definitive speakers are consistently top-rated and were chosen by experts in Stereo Review for their home theater “Dream System.” A survey of U.S. dealers voted Definitive speakers #1 for quality and reliability among all speakers sold in the U.S.!

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(410) 363-7148
The Lifestyle 5 comes with the simplified RC-5 remote control. At extra cost, you can buy the deluxe RC-11 control, which is standard with the Lifestyle 10 system. The RC-11 is black and has more buttons than the RC-5 (thirty-four versus fifteen), plus two slide switches. Both are radio-frequency remotes that can be used from virtually anywhere in or around a typical home.

The RC-11 does provide more operating features than the RC-5 (such as track-sequence programming for CD’s), and it is certainly easier to use than a typical receiver or system remote control. Nevertheless, I would opt for the RC-5, which impressed me as having the finest ergonomic design I have ever encountered in a system remote control. If you have difficulty programming a VCR or operating a typical component audio system with its fifty or sixty control buttons, the RC-5 alone might decide you in favor of the Lifestyle 5.

The RC-5’s buttons are round, ⅝ inch in diameter, and marked more clearly and visibly than we are accustomed to seeing. Like the control itself, they are white, with black labels. Pressing any of the source buttons (AUX, AM/FM, CD, etc.) turns on the system and selects that source. Once the system is operating, if AM/FM has already been selected, the AM/FM button toggles between the two bands. As on the Music Center itself, a single pair of buttons is used for CD track selection and for stepping through the tuner’s station presets. Below them is another pair of buttons used for fast-scanning a CD or scanning the selected radio band.

Up/down volume buttons smoothly vary the Music Center’s output between its maximum level and fully off. There are three more buttons: auto off, mute, and off (the last is black, with white markings). Mute toggles between normal volume and silence (the pause/play button has the same effect, even if CD is not selected). Auto off shuts the system down automatically at a predetermined time. Pressing it once allows the system to play for 75 minutes, and each subsequent press subtracts 15 minutes of playing time. The off button shuts the system down at once.

Bose does not publish typical performance specifications for its products, and in the case of an integrated system such as the Lifestyle 5, it is not practical to make some of the measurements we would ordinarily perform on separate components. Our laboratory tests covered tuner performance (measured at the Music Center’s tape outputs), CD-player performance (measured at the Music Center’s CD outputs), frequency response and distortion of the low-level audio stages (through the auxiliary inputs), and loudspeaker performance (using the amplifiers in the bass module).

We measured the loudspeaker frequency response in our listening room, separately for the bass and satellite speakers. The satellites’ averaged room response was impressively smooth, varying less than ±2 dB from 400 Hz to 12 kHz. The close-miked response of the bass module had a mildly double-humped shape with an overall variation of less than ±3 dB from 50 to 150 Hz. The output fell off...
steeply at lower frequencies to about -20 dB at 40 Hz.

The bass-level balance adjustment on the Acoustimass bass module had a 6-dB range about its indicated normal setting. Our measurements and listening tests indicated that the normal setting was optimum for our room and that the useful lower limit of the system's response was around 50 Hz or slightly lower. The treble-level adjustment range was about ±7 dB at 6 kHz or higher, with a diminishing effect at lower frequencies (down to about 1 kHz). As with the bass, the indicated center setting for the high frequencies gave the most pleasing sound (as well as the most uniform measured response).

Quasi-anechoic MLS response measurements confirmed the excellent response uniformity of the Powered Acoustimass 5 Series II speakers over the useful range of the measurement, from about 400 Hz up. The satellite response at 2 meters varied less than ±2 dB from 500 Hz to 16 kHz. There was a 5-dB response notch just above 16 kHz.

Directivity measurements with swept noise signals indicated that the response -45 degrees off the satellite speaker's forward axis fell off to -3 dB at 3 kHz, -8 dB at 10 kHz, and -12 dB at 20 kHz. Although the 2½-inch Bose driver is inevitably somewhat more directive than a smaller tweeter, the upper frequencies carry only the high harmonics of a musical program, and the ability to aim the two drivers in each satellite in different directions makes it easy to adjust the effective dispersion as required.

Measuring the distortion of the bass module was not as easy as it is with conventional unpowered speakers. We set the input to produce a 90-dB sound-pressure level (SPL) at 1 meter from the bass port. Then, with the microphone close to the port, we measured the total harmonic distortion (THD) from 20 to 200 Hz at a constant input level. Readings ranged from 0.3 to 3 percent over much of that range, between about 90 and 170 Hz, and rose to between 5 and 10 percent from 20 to 80 Hz. These results may not be directly comparable with those from a more conventional loudspeaker, however, because of the signal processing applied by the active circuitry within the Powered Acoustimass 5 Series II. Specifically, it incorporates what Bose calls Dynamic Equalization—an automatic loudness compensator that progressively boosts the bass range as the volume is reduced in order to maintain a consistent tonal balance independent of level. (Without such compensation, there tends to be a subjective loss of bass as the level is turned down because of the ear's reduced low-frequency sensitivity at low volumes.)

The Powered Acoustimass speakers also have automatic protection circuitry to prevent damage to their electronics and drivers from excessive signal levels. Although we could not confirm the operation of the protection circuits by any obvious effect on the sound, we did find that we were unable to damage anything, or to produce significant audible distortion, even when we played CD's having extreme dynamic range at the system's maximum volume setting—a level so high as to completely preclude conversation.

The overall sound was as easy and effortless as we have ever experienced from a home audio system. Bearing in mind that all speakers have some degree of selectivity and sensitivity at low volumes.)

The Bose Lifestyle 5's overall sound was as easy and effortless as we have ever experienced from a home audio system.

To me, the icing on the Lifestyle cake is the RC-5 remote control, which exemplifies the goal of operating simplicity that was clearly at the heart of the system's design. Not once did I have to fumble or search for the desired button, and rarely before have I seen a complex consumer product so well engineered throughout as to be usable by any member of the household without frequent reference to the instruction manual. (That manual, incidentally, is a sizable and weighty 200-page volume, in five languages, that leaves no doubt in the reader's mind as to what should be done to achieve any desired result.)

The bottom line on the Bose Lifestyle 5 is that it is an attractive, easy to use, and thoroughly listenable music system that should bring good sound to many households in which a stack of black-finished components and prominent speaker cabinets would not be appreciated. It would be difficult to get better sound at its price, to say nothing of its nearly ultimate operating simplicity.

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Allison Acoustics AL115 Loudspeaker System

Allison Acoustics' AL Series of relatively small loudspeakers feature "room-matched design," meaning that they are intended to deliver the flattest power response when placed so that the center of the front panel is 2 feet from one wall and at least 3 feet from any other. The installation instructions suggest spacings for rooms where those distances are not feasible.

The original research into the effect of room boundaries on acoustic power response was begun by Roy Allison while he was chief engineer of Acoustic Research, and when he later formed his own company, Allison Acoustics, his findings were a key element in the design of its speakers. Last year the company was sold and moved from Massachusetts to Kentucky, but it continues to follow Allison's design principles and to use his distinctive convex-dome tweeter, recognized for its wide dispersion and extended range.

The AL115 is a two-way system with an 8-inch woofer crossing over to a single Allison Convex Diaphragm tweeter at 2 kHz. The woofer's diaphragm is hand-treated with a proprietary energy-absorbent compound to minimize resonances; the tweeter is cooled and damped with magnetic fluid. Like almost all the drivers used in Allison speakers, the AL115's are manufactured in the U.S. by Allison.

The woofer, which operates in a sealed acoustic-suspension enclosure, has a rated resonance frequency of 50 Hz. Its low-frequency response is rated as -3 dB at 41 Hz, -6 dB at 33 Hz. The system's nominal impedance is 6 ohms, and its sensitivity is given as 90 dB sound-pressure level (SPL) at 1 meter with a 2.83-volt input.

The AL115 is recommended for use with amplifiers rated up to 150 watts. Its drivers are protected against overload by a thermal current-sensing device, the Allison Power Shield, that shuts down their signal input if the drive current reaches a potentially damaging level. It resets automatically when the drive level is reduced.

The black-woodgrain-finished cabinet has a dark-gray, marbled front panel with rounded edges and a removable frameless plastic grille. The flexible, slightly convex grille snaps into a narrow slot around the front panel. The dome tweeter is also protected by a metal screen. The input connectors, multiway binding posts on 3/4-inch centers, are recessed into the rear of the cabinet.

We mounted the Allison AL115 speakers on 30-inch stands approximately at the recommended distances from the room boundaries. Their averaged room response was flat through the midrange, varying ±2 dB from 230 Hz to 1.2 kHz. There was a dip of 4 dB at about 2 kHz, followed by a 4-dB peak at 3.6 kHz and a return to midrange levels above 6 kHz.

The close-miked woofer response reached its maximum at 70 Hz, falling at 12 dB per octave below that point and at 3 dB per octave above it, up to nearly 1 kHz. The woofer and room-response curves did not splice as unambiguously as we would have liked, but the composite curve did indicate a maximum bass output at 70 Hz and a treble maximum at 3.6 kHz, with a ±4-dB variation over most of the audio range, from 120 Hz to 20 kHz.

A series of quasi-anechoic MLS response measurements showed a rough correspondence to our room-response measurements. Specifically, there was a peak of 4 or 5 dB at 3.6 kHz and a
TEST REPORTS

dip of about 4 dB at about 10 kHz, with the output rising by 2 or 3 dB from 10 to 20 kHz. Since MLS measurements in our room are possible only above 300 Hz, we could not use them to verify our judgment in splicing the woofer and room-response curves.

The Allison tweeter's dispersion was outstanding, with a level change over a 45-degree angle off the forward axis that did not exceed 2 dB up to 10 kHz, 7 dB at 15 kHz, and about 10 dB at 20 kHz. Group delay was very constant over most of the audio range, except for a jog at the 2-kHz crossover frequency (which was not clearly evident in most of our measurements).

The minimum impedance readings were 4 ohms at 20 Hz and between 100 and 150 Hz, 3.6 ohms at 10 kHz. There was a rise to 11 ohms at the 56-ohm bass resonance and a 20-ohm maximum at 1.5 kHz.

Sensitivity measured 89 dB SPL at 2.83 volts, very close to the 90-dB rating. We measured woofer distortion with an input of 3.2 volts, corresponding to a 90-dB SPL. It was slightly below 1 percent over most of the range from 1 kHz down to 70 Hz, rising to 2 percent at 60 Hz, 4.5 percent at 50 Hz, and 8 percent at 40 Hz.

The woofer cone bottomed with a single-cycle 100-Hz burst of 270 watts. At 1 kHz, the amplifier clipped at 470 watts before the speaker cone reached its limits, and at 10 kHz the amplifier delivered a single-cycle burst of 1,785 watts without damage to the tweeter or even audible distress. 

In listening tests, the Allison AL115 proved to be even better than our measurements would suggest. The various features of our response measurements were not identifiable, for the most part, or else imparted positive qualities to the overall sound. Heard side by side with some other speakers we had on hand, the AL115's frequently proved to be more listenable, partly because of their exceptional transparency in the high frequencies. It seems likely that this transparency derives from the convex-dome tweeter.

Although not particularly strong in the low bass, the AL115 could hardly be described as deficient in the lower octaves, and it was notably free from the middle- and upper-bass emphasis that so often colors reproduction of male voices.

The principal anomaly in our performance measurements—the peak at 3.6 kHz—was not audibly obvious. Perhaps it was partly responsible for the crispness that we sometimes heard, but if so its effect was no greater than that of the responses variations of most speakers. We found the crispness to be a plus, but it is a matter of taste.

The Allison AL115, neither the cheapest nor the most expensive small two-way speaker system, is a good value. Hear it if you can, if only to decide whether its sound appeals as much to you as it did to us.

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PLAY YOUR PORTABLE CD PLAYER THROUGH YOUR CAR FM RADIO

The Sound Feeder Model SF100 Mobile Audio Connector is the most practical and convenient way to connect your portable Compact Disc Player or Cassette Player to your car's existing FM radio speaker system. By simply plugging the Sound Feeder into your cigarette lighter, connecting the audio input wire to your portable player, and setting it to the desired station, you can begin to enjoy the amplified STEREO sound of your portable music source without the bother of dangerous (and often illegal) headphones.

As an added feature, the Sound Feeder contains a specially designed DC-to-DC converter that provides 4.5V, 6V, or 9V DC power from the car cigarette lighter to most brands of portable players. The Sound Feeder's combination of stereo sound, easy installation, portability, and power supply feature, plus its ability to reduce the risk of theft and save the expense of a costly in-dash system, make it the ideal accessory for every vehicle owner.
The new 2000 Series from B&W consists of five inexpensive speakers featuring a new front-baffle design. The contoured, molded polypropylene panel, with a large-radius curved surface, is ribbed to increase stiffness and eliminate resonances. B&W says that this design surpasses previous ones in its freedom from edge diffraction, resulting in exceptionally transparent sound and natural imaging. To satisfy the special requirements of audio/video home theater systems as well as conventional stereo installations, all the B&W 2000 Series speakers (including an acoustically and cosmetically matched center-channel model) incorporate the company's Zero Magnetic Field (ZMF) shielding system, enabling them to be placed close to a TV set or video monitor without disturbing the picture.

The Model 2003 is next to the top of the series. It is a two-way system based on a single 6½-inch woofer with a damped acrylic-fiber cone and a rubber surround operating in a vented enclosure. The crossover, at 3 kHz, is to a 1-inch dome tweeter with a damped polyester diaphragm and magnetic-fluid cooling.

The woofer, in the center of the front panel, is protected by a frameless, perforated PVC grille that has minimal effect on the system's acoustic output. The bass port is below it and the tweeter above it. The cabinet would normally be installed in a vertical position and is ideal for stand mounting. Multiway input binding posts are recessed into the back panel near the top of the cabinet. Although they will accept single banana plugs, they are deliberately placed too far apart to allow the use of dual banana plugs. (This is common practice in Great Britain, where B&W speakers originate, since standard dual banana plugs can be inserted into British AC outlets.)

For our room-response measurements and listening tests, we placed the B&W 2003 speakers on 30-inch stands about 9 feet apart and 18 inches in front of a wall. The room response, averaged for the left and right speakers, was exceptionally flat and smooth from 50 Hz to 20 kHz, with just a ±2-dB variation over that range. Floor reflections caused larger variations at lower frequencies, although the overall response was still within ±6 dB from 50 Hz to 20 kHz.

The close-miked woofer response, combined with the port output and corrected for the relative dimensions of the cone and port, was within ±2 dB from 50 to 300 Hz, sloping down 4 or 5 dB from 300 to 500 Hz, where it matched the average room-response level. The combined response of ±3 dB from 45 Hz to 20 kHz is very good for a speaker of this size.

A quasi-anechoic MLS measurement confirmed the exceptional flatness of the B&W 2003's output. The response variation at a 2-meter distance was only ±2.5 dB from 300 Hz to 20 kHz and was about half that much over most of the audio range.

Measurements with swept random noise gave similar results on-axis: ±2 dB from 80 Hz to 20 kHz. At 45 degrees off-axis, the response remained within 3 dB of the on-axis level up to 6 kHz, dropping off by 7 dB at 10 kHz and 15 dB at 20 kHz. That is a slightly greater off-axis rolloff than we have measured from many speakers with similar driver complements, but our listening tests did not reveal any consequent loss of highs in music.

The system impedance reached its minimum of 4.7 ohms at 200 Hz and 8 kHz, confirming B&W's very conservative 4-ohm rating. There were
impedance peaks of 25 ohms at 29 Hz and 20 ohms at 85 Hz and a maximum reading of 30 ohms at 1.8 kHz. Sensitivity at 1 meter with a 2.83-volt input of pink noise was 90 dB sound-pressure level (SPL), slightly better than the rated 89 dB. The woofer distortion at that level (which corresponds roughly to a rather high listening volume) was typically 1 percent from 2 kHz down to 120 Hz, rising to 3 percent at 80 Hz and 10 percent at 60 Hz. In a pulse power test at 100 Hz, the Model 2003’s small woofer began to sound hard at about 80 watts input and bottomed noisily at 110 watts. At higher frequencies the speaker easily absorbed single-cycle bursts of many hundreds of watts.

The crossover between the woofer and tweeter was undetectable by any measurement we could apply. Sometimes a phase anomaly at the crossover frequency can give a clue to the crossover point, but no such effect was apparent in our tests.

In view of B&W’s emphasis on the Model 2003’s lack of an external magnetic field, we checked it out with a magnetometer. The highest reading, directly at the woofer grille, was a mere 1 gauss. Holding the speaker directly against any portion of a TV set had no effect on the picture. Unshielded speakers often give considerably higher readings at distances of a foot or more and usually have to be kept at a distance from a TV to prevent color changes.

Listening to the B&W 2003 (before making any measurements) demonstrated that it had an uncolored, balanced sound. Its high end was obviously smooth and extended, without a trace of edginess. The speaker was refreshingly free from lower-midrange boom on male voices, yet it never had such effect was apparent in our tests.

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Audio product launches usually follow a strict evolutionary path. The first models are normally large and AC-powered; they’re followed by smaller components, with battery-powered portables arriving last. This sequence follows the natural engineering progression, enabling companies to begin recouping their investments more quickly than they might otherwise.

Sony’s MiniDisc launch has gone the opposite way. The first models were portables, followed by car and component models, with the largest version coming last. Although certainly costly for Sony, this inversion served to emphasize MD’s strength as a portable format. Without the support of home decks, however, the format would be something of a two-legged stool. And, eventually, they came.

The MDS-501 is the first full-size home MD recorder (the earlier MDS-101 was a “midi”-size component). At first glance, it might be mistaken for a CD player, but a closer look at its loading slot shows that no CD could ever enter there. Instead, either prerecorded or blank MD cartridges are loaded into the slot, much the way you’d insert a disc into a car CD player. An LED lights to show when a disc is loaded, and an eject button is used to retrieve discs. There is a power on/off button, but the deck will also turn on automatically when an MD is inserted.

Besides the usual transport controls, there is a small volume control that varies the output level of a nearby ¼-inch headphone jack. An AMS (Automatic Music Sensor) knob is used to cue to the beginning of a specific track, specify the order of programmed tracks, perform edit functions, enter text data, and set the clock. The AMS knob operates like a jog dial in that it is continuously variable without stops; in addition, it can be pressed to conveniently play or pause a disc. Incidentally, when you hit the play button, playback starts instantaneously, thanks to a memory-start function that keeps a small amount of data ready in memory so that the player doesn’t have to wait for the disc.

A display button lets you see either the name of the current track or the time remaining on the disc. The display itself tells you everything you need to know about the MDS-501’s operation. A music calendar indicates the track being played back, edited, or recorded. A surrounding grid also differentiates between prerecorded and user-recorded discs: It blanks when a recordable disc is played. An alphanumeric display shows disc and track titles, track numbers, total or elapsed playing time, date and time of a recording, and editing messages such as “Erase,” “Divide,” and “Combine,” as well as diagnostic messages.
The Powered Subwoofer That Has The Audio And Video Press Jumping Out Of Their Seats.

A jet roaring in *Top Gun*. The heavy-footed killer robot in *Robocop*. A semi hitting concrete after a 20 foot fall in *Terminator 2*. These are examples of the substantial, very low-frequency effects on the soundtracks of today's movies. Such frequencies are rare in music, and are beyond the capabilities of most speakers designed for music.

The Cambridge SoundWorks Powered Subwoofer by Henry Kloss was created to reproduce those ultra-low, ultra-strong bass signals with the power and impact you would experience in movie theaters with the very best sound systems. It is designed to supplement (not replace) the subwoofer(s) of Ensemble or Ensemble II. It will also work with speakers from other companies.

Remarkable bass performance.

The Powered Subwoofer consists of a heavy duty, 12 inch long-throw acoustic suspension woofer integrated with a 140 watt amplifier—all in a high-pressure black laminate cabinet. Its control panel includes a bass level control and an 18dB per octave, four-position electronic crossover frequency selector (to match the subwoofer to your other speakers).

Additionally, an optional electronic crossover* will provide 18 dB per octave, high-pass, line-level filters for the main and center amplifiers. These filters allow you to keep strong, low frequencies of sound effects out of the front speakers. These signals can cause distortion, even in speakers designed for full-range music.

The Powered Subwoofer’s bass performance is simply awesome. It reproduces accurate bass to below 30 Hz. You’ll hear soundtracks the way they were meant to be heard. In fact the bass is better than most theaters! At the press event when we introduced our Powered Subwoofer, we had startled members of the audio and video press literally “jumping out of their seats” during demonstrations of movie soundtracks. The factory-direct price of the Powered Subwoofer is $599.

Optional “slave” subwoofer.

For all-out home theater performance, you can add our optional Slave Subwoofer, which is identical to our Powered Subwoofer except that it lacks the amplifier and controls. It uses the amplifier and controls built into the Powered Subwoofer. Amplifier output jumps from 140 to 200 watts when the Slave Subwoofer is connected.

The combination of the two speakers can reproduce a 30 Hz signal cleanly to a sound pressure level of over 100 dB in a 3,000 cubic foot room! That’s enough clean, deep bass for the largest home theaters, and the most demanding listeners. The factory-direct price of the Slave Subwoofer is $299.

No compromises. No apologies.

The combination of our Ensemble speaker system, Center Channel Plus speaker, *The Surround* rear/side speakers, Powered Subwoofer and Slave Subwoofer (see photo at left) creates a home theater speaker system that we believe is the best of its kind.

Although you can spend thousands more on competing systems, we don’t know of any that outperform this $1,999 package. If you’d like more information, a free catalog or our new booklet, “Getting The Most From Your Dolby Surround System,” call our toll-free number any time.

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We Know How To Make Loudspeakers.
peak-reading stereo bar-graph meter is used to monitor recording and playback levels.

Less frequently used controls are hidden behind a hinged door on the front panel's right side. These include buttons for editing operations, a button for selecting playback modes such as random and programmed play, high-speed search buttons, and a button for selecting A-B, track, or disc repeat. A knob is provided for setting input levels from analog sources; each channel can be adjusted separately. There are also switches for selecting either analog or digital inputs, setting recording or playback to be triggered by an external timer, and setting the internal clock's date and time.

Around back, the MDS-501 sports four phono jacks for analog line-level input and output and two Toslink optical connectors for digital audio input and output. The MDS-501 accommodates only the CD-standard 44.1-kHz sampling rate.

The RM-D1M infrared remote control supplied with the MDS-501 is a formidable handful of fifty-six buttons. Functions include transport control, power switching, text entry, direct track access (up to twenty-five tracks), track-sequence programming (also up to twenty-five tracks), random and repeat play, track intro-scan (6, 10, or 20 seconds), and 3-second auto-spacing between tracks—useful when recording tapes from an MD so that cassette-track search features can be used reliably with them. The remote can also be used to synchronize a Sony CD player with the MDS-501 for making recordings. Curiously, the remote does not let you manipulate any of the MDS-501's editing features; perhaps Sony is afraid of accidental button-pushing.

Operation of the MDS-501 is fairly straightforward. Playback works much as with a CD player, except that disc and track titles are displayed. Specific tracks can be cued by pressing direct-track access or forward/reverse scan buttons on the remote or by twisting the front-panel AMS dial right or left. Other functions, such as random track playback and track-sequence programming, are also easily accomplished.

What clearly differentiates the operation of the MDS-501 from that of a CD player, however, is its recording function. It is especially important to note that the MDS-501 has two recording modes. In the ALL REC ON mode, it automatically erases the entire recorded contents of the inserted MD. If you want to keep the existing contents of an MD and add new data, you must set the recording mode to ALL REC OFF before you load the disc. Like all other consumer digital audio recorders, the MDS-501 incorporates the Serial Copy Management System (SCMS) and will therefore refuse to make a direct digital copy of a source that is itself a direct digital copy of an original.

Recording itself is pretty easy. You simply select analog or digital input and press the record and play buttons simultaneously. The deck automatically locates blank portions on the disc to accommodate the new data, or it erases the existing data, depending on the recording mode. In either mode, the deck displays the time remaining on the disc. Level-setting is unnecessary in direct-digital recording (as from the digital output of a CD player to the MDS-501's digital input), but when recording from the analog inputs you must adjust levels manually. In either case, track numbers can be marked automatically or manually.

Changes made to an MD through recording are finalized only when you update the disc's table of contents (TOC) by ejecting it or hitting the power switch to go to standby mode. Like cassettes and floppy disks, MD's have a record-protect tab to prevent accidental erasure.

The edit buttons and AMS dial enable you to select a number of special features. When turned on, the Level Sync function automatically marks a new track whenever a silence occurs (new tracks are always automatically marked when recording digitally from a CD), or you can manually add track numbers by pressing the record button while recording. The Divide function lets you split an existing track into two or more tracks and automatically renumbers succeeding tracks up to a maximum of 255 (a track must be at
We'd like to clear up some misconceptions on the subject of speaker systems for use in Dolby Pro Logic home theater systems.

**Misconception #1:** You can use any speakers for the surround and center channels.

The center channel is very important because a large portion of soundtracks is directed to the center in systems with Pro Logic. That speaker should have smooth frequency response, good power handling—and it must match the tonal balance of the main speakers. Also, a center channel speaker should be magnetically shielded to prevent video interference.

Surround speakers should also match the tonal balance of the front speakers. Indeed, all five speakers should have matching tonal balances for proper sound. But unlike front speakers, surround speakers should create a diffuse sound field. So the best systems with Pro Logic use "dipole radiating" surround speakers (e.g., The Surround II and The Surround speakers in our $797 and $1,117 packages).

All the systems on this page consist of speakers designed to match each other tonally. (Identical timbre).

**Misconception #2:** Use five identical speakers in a system with Pro Logic.

A number of companies have released speaker packages consisting of five matching mini-speakers (some with a subwoofer). This ignores the fact that the surround channels serve different purposes than the front channels.

**Misconception #3:** A good home theater speaker system costs thousands and thousands of dollars.

A number of retailers regularly sell $10,000 Pro Logic speaker systems. This is just not necessary.

We believe that the two more expensive systems on this page compete head-on with combinations selling for thousands more. Add our Powered Subwoofer ($599), and we'll compare them to anything on the market.

**$1,117 Home Theater Package Features Our Best Speakers.**

This system is built around our dual-subwoofer Ensemble speaker system (Audio magazine said it "may be the best value in the world"). The center channel speaker is our Center Channel Plus, a unique five-driver speaker that can be placed above or below your TV monitor. The surround speakers are The Surround, our best dipole radiating surround speaker. This system, especially when matched with our Powered Subwoofer, delivers awesome sound—far better than most theaters.

Cambridge SoundWorks products are not available in stores. Because we sell factory-direct, eliminating expensive middle-men, you can save thousands of dollars. And our 30-day return policy means you take no risk.

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Audio Hall of Fame member Henry Kloss.

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All of our speakers are backed by a five year parts and labor warranty. In some cases, we'll even send you a replacement speaker before we've received your defective unit.

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The Surround ($399 pr) & The Surround II ($249 pr) use dipole radiator terminology for surround sound the way it was meant to be heard. Hundreds less than competing speakers.

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We think Ambiance is the best "mini" speaker available, regardless of price. Bass and high frequency dispersion are unmatched in its category. $175-$200 each.

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NEW: Model Eleven A transportable component system.


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At least 8 seconds long to be counted). Or you can go in reverse with the Combine function, putting two or more sequential tracks together into one and renumbering the succeeding tracks accordingly.

A Rehearsal mode enables you to audition an edit point before committing to it, and in the process to vary that point over a range of -128 to +127 steps of 0.06 second each. You can also change the numerical order of the tracks on a disc and erase a whole disc, a track, or part of a track. All of these editing tasks are fast and easy to perform, in part because they require no physical alteration of the data on a disc. All that gets changed is the MD's table of contents, which is what tells the player where everything is located on the disc, and no edit is final until the TOC is rewritten with your changes.

After dividing and conquering your tracks, you'll want to label them. The MDS-501 enables you to create disc and track titles of as many as 100 capital and lower-case letters, numbers, and symbols, to a maximum of 1,700 characters per disc. The labeling is easily accomplished using either the front-panel AMS dial or the remote control's keypad to select characters.

Like other MD components, the MDS-501 uses Sony's ATRAC perceptual-coding system to reduce the amount of data that must be recorded on the disc by about 80 percent (currently the only practical method of squeezing CD-length recordings into such a small package). Traditional measurements are still useful for diagnosing gross performance problems in MD decks, but perceptual coding shifts more of the burden onto listening tests. I was therefore especially careful in my auditioning of the MDS-501, using a variety of prerecorded MD's and both 60- and 74-minute recordings made on our test sample.

In direct comparison with my reference CD player, the MDS-501 sounded subtly but distinctively different. There is no mistaking the MD sound: It creeps out just like Dan Rather's suppressed Texas drawl. Although the sonic artifacts were perhaps slightly less obvious than with previous MD
decks, they were still clearly present. Bench tests indicated that the MDS-501's ATRAC encoder does operate a little differently in some respects from the one used in earlier MiniDisc recorders, particularly at very high frequencies, but just as no amount of speech coaching could ever relieve Mr. Rather of his accent, perhaps MD will always have a slight twang to the trained ear.

The principal ATRAC artifacts are a watery, slightly unstable shifting in the tonal characteristics and imaging of middle frequencies and a smearing of high frequencies and transients. For example, cymbals sometimes sound slightly odd in an MD recording. To put this into perspective, the artifacts are fairly subtle and have been completely inaudible to about half the people I've put through double-blind comparisons. Given that MD was never meant to compete with CD on sound quality, but instead to make some of the benefits of CD more portable, you might not consider the format's sonic shortcomings very important. In other words, if you'll be using the MDS-501 primarily to make recordings for portable listening, you probably won't care much about ATRAC's relatively minor flaws.

After listening for ATRAC artifacts, I turned my ear to other, more mundane considerations, such as noise, distortion, and so forth. I did not hear any outstanding problems, and in general the MDS-501's basic electronic performance seemed on a par with that of previous MD recorders, or similar to that of a good portable CD player. Subsequent bench measurements essentially confirmed that judgment. My final test (a favorite here at Hammer Laboratories) was a good fist-slamming into the top and sides of the recorder, which demonstrated that the MDS-501 was completely resistant to vibration.

Operationally, the MDS-501 was great. If you are into editing, you'll love the flexibility afforded by the combination of disc recording and a long playback memory buffer. You can cobble together pieces from all over the disc and still have the result play back continuously. Other features also worked well. I especially liked the AMS jog wheel and the way it lets you quickly select tracks. This is an absolutely terrific feature, and I hope it eventually shows up on CD players.

The MDS-501 will encourage your secret recording-engineer persona to emerge from hiding, indulging itself in elaborate editing projects that would be all but impossible on non-professional tape equipment. But even if you just want to record MD's for portable listening or to enjoy noncritical listening at home, the MDS-501 is ready to accommodate you.
We also design disc player t

"It yielded tight, well-controlled sound whose overall balance and imaging was beyond reproach."

Adcom's compact disc players have always turned the heads of industry critics. Recent comments when reviewing the GCD-600 in *High Performance Review*. Stop by your the best heads in the business are saying about Adcom's components.
ed our carousel
to turn heads.

"...the Adcom GCD-600 came about as close as we have heard from CD players and separate player/converter combinations costing several times as much."

"The piano concerto was impressively reproduced and the clarity and total accuracy prompted us to listen to it over and over again."

Similarly, Martin Forrest wrote the above to local Adcom dealer and listen to what
Like most folks these days, I've rediscovered my long-standing affection for dinosaurs. Not the kind seen in *Jurassic Park*, but rather those found in my private collection of fossils: authentic "Stop Reagan in '80" and "Crazy Eddie" T-shirts, a circa-1986 ITT Xtra personal computer with 256K memory, and approximately 2,200 LP's.

Now, some "audio archaeologists" suggest that the launches of the Sony-developed MiniDisc (MD) and Philips's Digital Compact Cassette (DCC) place the analog compact cassette next in line for the bone heap. But I think that's rushing things a bit. Although some digital format will certainly be the future of audio recording, I've yet to be convinced that the analog cassette is in imminent danger of extinction.

In fact, according to the International Tape and Disc Association, the audio cassette has at least another ten years of steady, if slowing, growth ahead. The obvious reason is that the cassette is pretty convenient—unlike the LP, which was strictly an in-home medium and thus easily supplanted by the superior-sounding and far more convenient CD. And, of course, cassettes are *everywhere*: in the
home, in the car, on the train, on the beach, in offices, schools... well, you get the picture.

Moreover, when you consider that an estimated 4.4 billion blank cassettes have been sold in the U.S. since 1980—with an additional 450 million expected to be sold this year—there's little doubt that both MD and DCC have an extremely tough act to follow. Making matters even tougher is that the two digital technologies have to compete (see the table below, "How the Recording Formats Stack Up"). I don't know about you, but my bank book is urging me to sit this one out, at least until a winner nears the gate. Besides, I'm pretty satisfied right now with the performance of my homemade tapes. Indeed, I actually like the analog cassette. I like its universality and its technical challenges. It's a creative medium—a magnetic canvas of sorts on which I try to capture my individual musical preferences.

### A Sound Checklist

The way I see it, anyone who makes a habit of taping a CD or LP (other than a collector's item) from start to finish is a total wuss. I mean, why bother? If I want to listen to the Stones' "Some Girls," I'll put on the CD. But I have only one recording that contains the songs King Bee,
Parachute Woman, and You Got the Silver, and that's my own Stones anthology, a tape I call "Time Warp." The same applies to my other one-of-a-kind collections by such artists as Ray Charles, Steely Dan, Hank Williams, and Howling Wolf—not to mention such genre compilations as "All That Bebop," "Going for Baroque," and "Hoedown in Motown."

Canny compilation titles aside, most homemade tapes only sound as good as the hardware used to record them. It therefore stands to reason that a serious home recordist should have a somewhat serious tape deck, preferably one equipped with as many of the following features as possible:

- A three-head (playback/record/erase) configuration for better sonic performance and to enable off-the-tape monitoring while recording.
- A well-constructed tape transport with at least two motors (two per well in a dubbing deck).
- Some means, automatic or manual, of adjusting the recording bias.
- Dolby B and C noise reduction and Dolby HX Pro. Very serious home recordists may wish to consider the new Dolby S noise reduction. More on Dolby later.
- A readable peak-level meter.
- A real-time tape counter—as opposed to the typical numeric counter (a must-have for measuring remaining or elapsed tape time).

Generally speaking, dubbing decks sacrifice some sound quality or recording flexibility for their dual-well convenience (few are three-head units). Dolby B noise reduction (for both playback and recording) is an absolute must in this case—as are rugged tape transports and Dolby HX Pro.

**Tale of the Tape**

Despite the absurd variety of tape lengths and formulations available nowadays, I don't believe choosing a blank cassette should be as agonizing as shopping for a new car. Although I make it a rule to steer clear of private brands and no-label stock—out of respect for my equipment and to safeguard against oxide shedding—I'm satisfied with most major-brand chrome-type tapes (Type II or high-bias tapes). I've used standard ferric-oxide tapes (Type I, or normal bias) in a pinch, but never without noise reduction to compensate for the higher tape hiss.

While I sometimes buy metal tapes (Type IV) on sale, I don't believe that metal's advantages over Type II—superior high-frequency response and signal-retention characteristics, which can yield better dubs from CD's—are always worth the added expense, especially if the deck I'm using incorporates Dolby HX Pro.

Longer-length tapes (74 or 100 minutes instead of 60 or 90 minutes) are a different story. True, we're only talking about an extra 7 minutes a side at most, but the added cost is often negligible while the extra recording/playback time is always useful. The only problem I've had with longer-length tapes is the lack of appropriate settings on my recorder's real-time counter.

That's no big deal: I simply set the

Both of the two-head wells in Teac's W-6000R ($750) are said to deliver swift auto-reverse operation thanks to the use of an infrared device that senses the tape leader. Features include Dolby HX Pro, Dolby B and C noise reduction, a pitch control in Deck I, manual and automatic recording-level adjustment, automatic fading, mic/line/tape mixing, and a remote control.

Denon's DRW-840 dubbing deck ($400) has two heads in each well and features Dolby HX Pro, Dolby B and C noise reduction, an output-level indicator for each channel, a high-speed dubbing mode, a relay mode that automatically switches from Deck A to Deck B during recording or playback, and controls for music search and bias adjustment.

Sony's TC-K611S ($400) is one of the least expensive decks to offer all three types of Dolby noise reduction: B, C, and S. The three-head deck also features a powered loading mechanism, Dolby HX Pro, a linear tape counter with memory, and music-search and record-mute controls.
justments in the recording level. To plan my last few selections
0:00, fast forward to the end, and note
The closest tape length. When
say that most clean analog material
slightly on the “hot” side, which is to
result in a tape with more peaks and
should be handled with some finesse,
esential but delicate procedure
eters—before making any needed ad-
playback level by ear to that of the
the selected track, then compare its
hearse record” about 30 seconds of
loud. In such situations, I usually “re-
that produces the same peak levels on
nummered switches on a cassette deck:
Dolby B, Dolby C, Dolby HX Pro, and
sometimes Dolby S.
To begin with, none of these sys-
em has anything to do with surround
Dolby B encoding should be played
any decoding at all (say, on a cheapo headphone
portable). Some people even prefer
playback without any decod-
Dolby S tapes are listenable, but not very hi-fi,
Dolby C and S. Dolby B-encoded
Dolby B decoding should be played
noisy results using only Dolby B decoding. If you
think that Dolby C has been left out
of this quasi-compatibility arrange-
ment, you’re right. Dolby C in, Dolby
out, or you may as well forget it.
My advice: If you have it, use Dol-
by S. If you don’t ever expect your
tapes to be played on equipment that
lacks Dolby C, use Dolby C. Unless
you don’t mind tape hiss, use Dolby B
in the absence of anything better.

Biased Opinions

Regardless of whether you use
noise reduction or not, setting the
proper recording bias for the tape
should be a standard procedure. An
ultrasonic signal applied to the tape
along with the audio. bias acts as a

Harman Kardon's TD-4400 ($449) is a two-head deck featuring separate motors for
the tape reels and capstan, Dolby HX Pro, Dolby B and C noise reduction, peak-level meters,
a bias fine-tune control, a linear time counter, programmable music search, and an
intro-scan mode that plays 15-second samples of every song on a cassette.

The Technics RS-TR777 ($300) combines a playback-only deck with a two-head recording deck.
It features Dolby HX Pro, Dolby B and C noise reduction, a 45-second fast-wind time for C-60
 cassetes, powered loading mechanisms, manual bias adjustment, and an automatic setup mode
that adjusts bias, equalization, and recording level for optimal performance with the tape used.

Dolby B, C, and S are all encode-
decode noise-reduction systems that
operate by selectively boosting low-
level, high-frequency signals (approx-
imately over the same frequency
range where most tape hiss occurs)
during recording. On playback, these
signals are scaled down to their prop-
er levels, prompting an equal redu-
ction in the hiss behind them. The
three systems differ in their ability to
do this, with Dolby B providing the
least noise reduction and Dolby S the
most.

The trick is in that “encode-de-
code” business. In order to obtain any
noise reduction, a tape recorded with
Dolby B encoding should be played
back on a machine having its Dolby B
decoder switched on. Likewise with
Dolby C and S. Dolby B-encoded
tapes are listenable, but not very hi-fi,
when played back without any decod-
ing at all (say, on a cheapo headphone
portable). Some people even prefer
undecoded playback on portable and
car systems for its boosted highs.
Similarly, Dolby S tapes can be
played back with listenable results us-
ing only Dolby B decoding. If you
think that Dolby C has been left out
of this quasi-compatibility arrange-
ment, you’re right. Dolby C in, Dolby
out, or you may as well forget it.
My advice: If you have it, use Dol-
by S. If you don’t ever expect your
tapes to be played on equipment that
lacks Dolby C, use Dolby C. Unless
you don’t mind tape hiss, use Dolby B
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Biased Opinions

Regardless of whether you use
noise reduction or not, setting the
proper recording bias for the tape
should be a standard procedure. An
ultrasonic signal applied to the tape
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transitions if you start the deck in or half-dime (usually it's more like a quarter). Tight "segués" controls neither start nor stop on a tape. The amount of bias signal you use influences nearly all important aspects of a tape's sound quality, including distortion, frequency response, output level, and background noise.

While most home decks adjust their bias settings automatically by detecting the different holes on the back edge of each cassette, the better decks also provide a way to fine-tune the bias level in order to match the individual characteristics of each tape more closely. Carefully follow the deck manufacturer's recommendations for using a bias fine-tuning feature. In some decks, the process is automated, saving you a great deal of trouble.

Dolby HX Pro further extends the high-frequency range over which high-level signals can be recorded by dynamically varying the bias level according to the level of high frequencies in the music. HX Pro is a recording-only process and usually cannot be turned off. It can be used in conjuction with any noise-reduction system or none at all. It is a very desirable feature for a cassette deck because you may be able to get away with a less expensive grade of tape while maintaining high-frequency performance.

**Taking Care**

A pair of headphones can be indispensable for monitoring the progress of your recordings. You'll hear all the nitty-grit between cuts (how about that for an obscure 1970's allusion?). Also, neatness counts, so don't forget to accurately label your finished tapes and the insert cards in their cases as soon as you pop one out of the machine.

Don't neglect essential hardware maintenance. Clean your deck's heads, capstans, and pinch-rollers—either with a commercial cassette-deck cleaning system or with a little isopropyl alcohol on a cotton swab—after every 10 to 20 hours of use. A head demagnetizer is also a wise investment and should be deployed after every 40 or so hours of use. (You don't really need to demagnetize a two-head deck if you use it to record every now and then, but it won't hurt either.)

That's about it in terms of applied technology. But the true secret of making a first-rate tape compilation is to follow your tastes and sensibilities—which essentially boils down to making a prime selection of material and maintaining smooth (musically appropriate) transitions between songs. Knowledge of and practice with your deck's pause control is essential (see "Need to Know" at left for more tips), but you don't necessarily need to leave the several seconds of silence required for most automatic music-sensing systems.

Admittedly, most, if not all, of the rituals described above will be a thing of the past once the age of digital home recording arrives in full. But until then, it may be worth rattling a few bones to prolong the life of your treasured dinosaurs.

**Steve Schwartz** is a New York City-based free-lance writer whose neighbors wish he would find a quieter pastime.
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CELESTION

The Difference is Fundamental.
Audio technology has come a long way since Thomas Edison fooled that dog of his. Yet it could be argued that the most profound transformation in recent years has not been in the equipment, but in how it is sold. With audio systems of one sort or another in an estimated 94 percent of American homes, hi-fi specialty shops have branched out into video and associated electronics. Mass merchandisers and discounters, meanwhile, in their wars on each other and any other dealers who might get in the way, have relegated audio hardware to the status of toaster ovens.

Entirely new ways of buying have surfaced: home shopping on cable, infomercials, and computer online services. Mail order is bigger than ever. Futurists like Jim Snider and Faith Popcorn project us into a world where product information will be readily available via modem and retail stores will be part circus to attract traffic. They tell us stores will be museums where people go to look at the equipment, then go home to buy it. Even now, mass merchants often display audio equipment without thought to hook-up or demonstration, giving shoppers little opportunity to compare operation or performance.

With such pressures on traditional retail establishments, it’s surprising that their customer/salesperson relations tend to be spotty, at best. The skills and experience of audio floor-sales personnel span a wide range: You may encounter a talented, qualified, and knowledgeable person, or you may not. Retailers commit varying amounts of time and energy to customer service and employee product training. Although all will profess to high standards in these areas, their success in maintaining those standards also varies, and complete quality control of every customer encounter is impossible. All too often, mass merchandisers let their policies do the selling, demoting their salespeople to clerks.

In defense of audio salespeople, it should be said that their errors are mostly errors of omission—failure to provide adequate information or guidance rather than any attempt to actually cheat the customer. Either way, however, you need to be prepared to look out for yourself.
TRADE SECRETS

1 Set a budget, but be open-minded about it.

“How much do you want to spend?” may be a difficult question to answer right off the bat, especially if you don’t know which features are available at which prices. Remember, though, that you generally get what you pay for—deals that seem too good to be true usually are. You should also be aware that there is usually a point of diminishing returns in what you pay for audio equipment. Beyond that point, prices often climb at a rate disproportionate to improvements in performance or features. You will pay a premium for the newest technology, too. There’s nothing wrong with wanting to be the first on your block to own the latest, but don’t let yourself get railroaded into buying way beyond your foreseeable needs. The best approach is to be cautiously open-minded. It may be wise, for example, to spend a few dollars more than you originally intended in order to smooth the path to future enhancements, such as a subwoofer or a multichannel system.

2 Educate yourself—and ask questions.

Read the articles and reviews, look around, get the buzz, ask your friends, elicit opinions—then make up your own mind. Unprepared salespeople fear well-informed customers. Tactless salespeople, on the other hand, know that these customers are usually serious, ready-to-buy shoppers and will respect them accordingly. Beware of being immediately shoved in front of “the best unit we’ve got.” If you don’t understand certain technologies or features, ask, and insist on a good answer. You’re entitled to know what an S-video terminal is used for, or what “eight-times-oversampling” or “magnetically shielded” means if it’s being used as a selling point.

3 Be prepared to “qualify” yourself.

“Qualifying the customer” is sales jargon for the process of determining what you need, want, and can afford. In this critical initial stage, the salesperson should be getting to know you, asking a series of questions to home in on the products best suited to your particular requirements. Unfortunately, few of today’s salespeople take the time to qualify their customers effectively. Some major retailers have a “3-minute rule” If a sale doesn’t appear imminent by the end of that time, the employee is supposed to move on to other prospective buyers. A quick sales pitch, and they’re off to someone else. Ironically, failure to qualify customers adequately is one of the main reasons these same retailers tend to suffer high return rates. Go figure.

One of the best ways you can help a salesperson help you is to give the answers, even when you have not been asked the questions. Have a sketch of your room, with cabinet dimensions if applicable. Measure the distance from the seating area to where the speakers (and, in a home theater, TV) will be placed. Know the room’s acoustic properties. Be prepared to indicate your listening habits: types of music, how loud, amount of use, who will be operating the equipment, plans for future growth—in short, how you envision living with your system.

4 Get your hands on the equipment.

One of the big advantages of buying from a retail store is that you can actually see and touch the gear before you buy it. If you walk into a store to make a purchase, only to be told, “Please, don’t touch that,” walk out. An alert salesperson would say, “Let me show you how to work that.” If you don’t hear that, ask to be shown how to operate the piece, especially the remote control if there is one. Make sure you’re comfortable with the design and understand the buttons and functions. Even if there is no separate sound room, insist on hearing the equipment. If it’s not hooked up, don’t settle for “Just read the instructions.” Look at the back panel and make sure you understand the connections. By operating the equipment you’ll have a much better basis for comparing various models.

5 Scope out the service and return situation.

Although most mainstream audio manufacturers have very high standards, no assembly line has a zero defect rate, even with the tightest quality control. You can find someone who has had a bad experience with just about any brand. But some manufacturers are better known than others for reliability and ease of service. Do a little unconventional reconnaissance: Call or visit some large repair facilities. A cooperative technician will often be able to tell you which brands and models his shop encounters on a regular basis. Try to gather information from several sources. Reputable retailers will always stand behind their merchandise, but dealing with defective equipment is still a headache and an inconvenience. Why should you be among the random casualties of lemonitis if you can help it? And just in case you do have a problem, find out what the store’s service policy is before you buy. Will it take a faulty product back, or is it up to you to deal with the situation?

6 Keep an eye on value.

Since overstock and year-end closeouts from manufacturers are rare, when you run across a legitimate one, consider it carefully. Close-outs are a good opportunity to spend less than you originally planned or to acquire a higher-caliber piece than you could otherwise afford. It is a myth that products get discontinued because they are defective. No maker can afford to dump products on the market that will ultimately boomerang back for service.

Value-conscious shoppers may also find good hunting among demonstration units or open stock (returns). Reputable dealers will not repack such merchandise and represent it as new. (Nevertheless, inspect the cartons before you take them home—repacks can happen, even by accident.) But bear in mind that demo units can be abused, especially in mass-merchant displays where there is little or no traffic control. Returns can actually be a safer value. A component may have been returned because the customer was not properly qualified. Or perhaps the equipment was bought with the intention of taking advantage of a retailer’s liberal return policy. Monday morning, after the weekend parties, returns start piling up. Dealers plagued by such returns regularly discount them in order to resell them. You will probably never know the real history of a returned
component. If the box and packing look good, with all the accessories and manuals, and the unit itself appears in good shape, chances are that you’ve got a bargain—provided, of course, the price is right.

7 Watch out for “guaranteed lowest prices.”

Despite surveys claiming that consumers are less concerned with price than with quality, service, and selection, price is the dominant theme in today’s economy. Mass merchandisers shop each other relentlessly, invading competitors’ stores, secretly reciting prices into palm-held mini-recorders. Ironically, these efforts are not intended for what you’d expect: bragging rights about having the lowest prices. The real reason is to discover where they can raise prices. Example: If Dealer A has a receiver for $295, Dealer B is losing profit by tagging it at $275. Discovering this, Dealer B would adjust his price upward to just slightly below Dealer A’s price, maybe $289.

Another factor in pricing is the wholesale cost to the dealer. Volume buys and first offers of close-outs are sometimes awarded to “key” dealers. Yet manufacturers with large market shares have a vested interest in maintaining equal footing for all their dealers. And a savvy dealer will pull items off the shelf, into the back room, before being embarrassed by price. What all this adds up to is that prices will tend not to vary dramatically among competing dealers in any particular region. That’s not to say that you’ll never find any real bargains, but devoting a lot of time to shopping solely for price may not be a very productive strategy.

8 Be wary of incredible “loss leaders.”

Loss leaders are items selected, sometimes with manufacturers’ blessings, to show dramatic price reductions and to be advertised as “just one example of the savings you’ll find every day at Larry’s Stereo Land.” Quantities are usually limited to a handful, sometimes demos only. Loss leaders can be legitimate values, depending on the dealer’s ethics, but if you see something you want, you may have to move fast. Common practice, however, especially among the mass merchandisers, is to use loss leaders to attract you into the store, where the salesperson is “encouraged” to sell you something more profitable. “Bait and switch” is illegal, and the advertised merchandise must be offered for sale. But with subtle facial and vocal expressions, the salesperson may convey the message that Brand X on sale is not such a hot deal, which it often isn’t.

Whether any aspect of this type of advertising and selling involves actual deception is perhaps open to debate; the important thing is to understand it and to prepare yourself accordingly. If you go to a store in response to one of these special deals, don’t let yourself be steered away from it without evaluating the product first. On the other hand, don’t insist on buying something just because the price seems wonderful. Price and product both need to be right for you, and only you can be the final judge of that.

9 Get out and shop around.

Most dealers try to pre-empt your shopping. The common sentiment in the industry is that there is no such thing as a “be-back”—unless the sale is closed immediately, the customer will fall into the clutches of an evil high-pressure competitor and never be seen again. Many retailers feel they must resort to pressure tactics, which, of course, chase most people away, accomplishing the very thing they set out to prevent. Some even claim to have done your shopping for you. You may be shown a computer screen or printout that has prices for all the major dealers in the area—a very powerful and persuasive sales tool. Unfortunately, because prices can fluctuate daily, these lists are just too cumbersome to maintain accurately.

Shopping several dealers can uncover unexpected values. With more information, you’ll have a basis of comparison for identifying bona fide bargains when you run across them. Some manufacturers provide a discountable, “private” line of goods to certain dealers. The model numbers may be slightly different from those in the regular line, the cabinet colors may be different, but the basic products are often identical or close.

Another great reason to shop is to compare dealers and their sales personnel. You can then compare not only prices but also the quality of service. All else being equal, the hardest-working salesperson deserves your business. In the event of a problem or questions, he’s the one most likely to go the extra mile for you.

10 If you’re not sure, don’t buy it. If it’s not right for you, don’t keep it.

We’ve all heard, “If you don’t like it, you can always bring it back.” Liberal return policies are obviously a benefit to the shopper. Certainly any good dealer would rather give a refund than create bad will. In unskilled hands, however, a liberal return policy is all too often used as a “desperation close,” encouraging the purchase of an inappropriate item that may not stay sold. One of the most effective ways for a salesperson to insure your satisfaction and limit returns is to make certain of a proper match between you and the equipment. That is done by determining your needs at the outset—that is, by qualifying you. In the short-term drive for daily business, many retailers forget that the objective is for merchandise to stay sold.

Other dealers remember all too well, in ways that you may not like. To keep a lid on the nightmare of returned merchandise, discount and warehouse clubs often have strict return policies. Be careful. You may pay a price for the “deal of the century.”

Let’s face it, it’s a pain to return something. Your best defense is to make sure you’ve selected the right equipment in the first place. Salespeople are invariably taught about “overcoming objections” as a sales-closing skill. If you balk at buying, they are supposed to find out why and attempt to counter your reason. On the surface that seems a reasonable approach. In practice, however, it’s often used as a poor substitute for properly qualifying customers—too little caring too late. This is usually the point where you’ll feel pressured to buy. If you aren’t ready to buy, just say so. Don’t let anyone “hard-close” you. Buy when you’re ready and only what you really want. You, and probably even the dealer, will be happier in the long run.

Mark Elson is a management and sales-training consultant in the retail electronics industry.
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Let's get one thing straight: despite his reputation as a gloom-monger, Richard Thompson does not write depressing songs. Dark, obsessive, love-sick songs where betrayal, damage, or death is always a distinct possibility? Sure. But who said that had to be depressing?

"Truly happy music just isn't very interesting," Thompson told me by phone from England. "The best popular music is always about sad stuff, or serious, violent, or dangerous stuff. People like songs like Tom Dooley—"Hang down your head, you killed that girl, you're going to die." Or the Everly Brothers—"So sad to watch good love go bad." That's the good stuff, and I'm really just doing the same thing. When you're writing a song, you have to write about people in an immediate way, because you don't have a lot of time. So sometimes you have to write about extreme people, or ordinary people in extreme circumstances.

"I don't try to be negative," he continued. "I like to think that in songs where people die, at least they're going to a better place. I do write sad songs sometimes, and I try to write real songs. But I don't think I've ever written a pessimistic song."

Hold on a second. What about the notorious End of the Rainbow (from 1973's "I Want to See the Bright Lights Tonight" with Thompson's then-wife Linda), which advises a newborn child that "There's nothing at the end of the rainbow / There's nothing to grow up for anymore"?

"Well, maybe that one," he conceded. "I still enjoy it as a song, though. Sometimes you have to push it, you have to go that far out in order to come back again."

Thompson's just-released album, "Mirror Blue" (Capitol), may not change his status as a beloved cult figure, but it will keep fans scratching their heads over why he's not more popular. Though not as hard-rocking as 1991's "Rumour and Sigh," it consolidates that album's move to accessibility, a trend that began when Thompson linked up with L.A. producer Mitchell Froom (Los Lobos, Crowded House). The songs feel more hopeful than they did at the time of his breakup with Linda (which produced one of rock's greatest catharsis albums, 1982's "Shoot Out the Lights"). And the music is more free-wheeling, with jazz, country, and catchy pop/rock tunes, plus a saloon
ballad that sounds tailor-made for labelmate Frank Sinatra. English folk music is in there too, as it's been since Thompson's late-Sixties days as a member of Fairport Convention.

His real roots, however, go back to the Jerry Lee Lewis and Everly Brothers records that he wore out as a teenager. "I suppose I like the periods of music where there's real energy and freshness, and you get that when worlds collide," he said. "When you get Southern white boys trying to play the blues and it comes out as something new, and you can hear the excitement on the records. Or the early jazz things, where people were doing really innovative things. I find I have to remind myself of what the exciting things are, and to challenge myself to produce something that fresh. For me that's a matter of saying 'Does something have to be this complex?' I think my tendency is to be too complicated, and I have to remember to keep it simple."

S
imple or not, some of Thompson's best songs these days are still more twisted than anything Fairport or his Fifties heroes would have attempted. On "Mirror Blue," for example, Shane & Dixie tells of a Sid and Nancy-type couple bound for death and glory; they make it only as far as death. The song gets its edge from its improbably jolly rockabilly arrangement and the nasty gleam with which Thompson tells the sordid tale.

"The point is that they both live by that phrase, 'Fame and love will never die.' And they both do, they both peter out. So they were wrong and it wasn't worth it."

If that sounds like a bleak vision, Thompson also has a way of cracking a wide smile when you least expect it. For instance, the new album's MGB-GT, which appears at first to be a fun song about a fast car, actually is a fun song about a fast car, set to a sprightly folk-dance tune.

"I wanted to extract revenge on America with that one," he explained. "As a kid I was so frustrated by listening to Chuck Berry and Jan and Dean records, and not knowing what they were talking about. All those jargon songs about cars and surfing—we were over here in England scratching our heads, trying to play a line fifteen times to figure out what the words were, and it would always be some kind of carburator. And of course the Beach Boys had a whiny way of singing that made it especially un-
telligible—not fair, is it? I think jargon songs are the way of the future. No more plot songs from now on, no more boy meets girl, just long lists of spare parts."

But seriously, Thompson really does have a surprise in store for his next album. When internal shakeups at Capitol kept "Mirror Blue" on the shelf for six months after its originally planned summer release date, he used the time to write most of the followupp, "It's a pop record in the old-fashioned sense. Sixties-style, with 2½-minute songs. But you never know, of course. It might come out sounding just the same as any other record of mine."

It's typical of Thompson to check his ego at every turn. He remains the most humble of cult figures, withdrawing one of his albums, the perfectly fine live disc "Small Town Romance," because he couldn't accept his performances. And he brushes aside any suggestion that he's a world-class guitarist. "I think I'm just a guitar player who works within the song format. Whatever I'm doing, I try to relate to a song. I may not be a great instrumentalist, but I do try to be a stylist."

Similarly, Thompson kept a low profile when he recently received two high veteran-rocker honors: a boxed set and a couple of tribute albums. His only involvement with the boxed set ("Watching the Dark," on Ryko) was to veto a few songs that he found embarrassing. "A few tracks made me uncomfortable," he said. "It could have been the performance or the recording quality, but there were a few I couldn't live with. I think there's good stuff and bad stuff I've done. It's interesting to go back occasionally, but only as a reference, to see if I'm moving backward or not."

A
s for the tribute albums ("The World Is a Wonderful Place," featuring mostly folk-circuit performers on Green Linnett, and the forthcoming "Beat the Retreat," featuring R.E.M. and other rock heavyweights on Capitol), he hasn't heard them and doesn't want to. "I honestly tried not to get involved. It's flattering, but it's sort of embarrassing to me, and it's distracting—I'd rather just concentrate on what I'm doing. I think I have an adequate ego. It's big enough. I wouldn't want to make it any bigger."

"If I tried to make the records really commercial, I'd probably fall on my face," he said. "I'm sorry I can't be part of what's on the radio, but I'm sorry that everyone else can't be part of it either. I'm sorry there isn't a place for Randy Newman, or even some band like Crowded House, who I admire greatly and who seem to be a real pop band in the classic sense. But I'm not out to conquer the world. It's always nice when people like your music, but that doesn't mean everybody has to."

Reminded of Neil Young's famous "better to burn out than to fade away" dictum, Thompson's view is that it's even better not to do either. "I don't think that rock-and-roll is something where you have to die at twenty-five anymore," he said. "If you're a film director or a novelist you should just about be hitting it by the time you're forty. I think rock has become capable of affecting adult emotions and concepts; it isn't just a young person's music anymore. I don't see why I should burn out or anything. It just doesn't seem necessary."
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THE FORGOTTEN COMPONENT?

If you're looking for power and control in one package, take another look at the integrated amp.

BY DANIEL KUMIN

These days, the integrated amplifier is rather the forgotten player on the U.S. hi-fi field. In much of the rest of the world, however, the integrated amp—which you might think of either as a receiver without the tuner or as a preamp and a power amp combined in a single chassis—is the system building block of choice. How did this difference come about?

Americans enthusiastically embraced the stereo receiver in the 1960's and 1970's, perhaps because receivers initially offered better value (or at least more features) per dollar than separates, perhaps because we love products that combine several functions (consider the pedometer-watch-radio). Disdained by separate-components purists and the mass market alike, the integrated amp nearly disappeared from our stores, kept alive mainly by serious audiophiles with limited space and budgets.

Maybe we've been missing something. Even in today's age of digital audio and home theater, there's a place for a component that doesn't do everything. In fact, each argument in favor of a receiver can be turned on its head to support the value of the integrated amp.

No tuner section. Sure, receivers have built-in AM/FM reception—so you get more for your money. On the other hand, integrated amps are ideal for music lovers who live in hopeless-reception areas or who have no interest in radio. Why pay for circuitry you cannot or will not use? Integrated

The Acutus DIA 110, direct input amplifier ($995), employs passive controls and a high-sensitivity power section to eliminate the need for preamplification. It's rated to deliver up to 100 watts per channel.
Part of Pioneer's Elite series, the A-51 ($850) is rated to deliver 100 watts per channel into 8 ohms. It has six inputs, including phono, and features a source-direct switch and a bypassable phono-equalization circuit.

Carver's CMV-1185 ($850) has a Dolby Pro Logic decoder, seven audio inputs, and three video inputs. Rated power output is 80 watts each for the front left and right speakers, 90 watts for the center, and 35 watts each for two surrounds.

Denon's AVC-3030 ($1,350) packs a Dolby Pro Logic decoder, a nine-mode ambience processor with adjustable parameters, and a power section rated to deliver 110 watts each to the three front channels and 35 watts apiece to a pair of surround outputs.

Harman Kardon's HK6350R ($499) is rated to deliver 70 watts per channel into 8 ohms. It has one external-processor loop, two tape loops, loudness-compensation and infrasonic-filter switches, and four inputs, including phono.

amps should also appeal strongly to two additional classes of music listeners: 1) radio fans who want the very best tuner they can find or afford rather than accepting whatever comes in a receiver, and 2) casual listeners who are satisfied with the performance of an inexpensive AM/FM table radio or who don't mind wiring up an old, cast-off receiver and using it as an occasional tuner.

**Simplicity.** As receivers have evolved into ever more feature-laden forms, their perceived value has increased, but so has their complexity—to the point where long sessions with the owner's manual have become an indispensable part of using today's A/V models. In stark contrast, most of today's integrated amps are beacons of ergonomic sanity. If you want a generous complement of audio inputs and control functions, such as two or more tape loops with bidirectional dubbing and independent source selection for recording and listening—without mind-boggling visual displays and a computer-like user interface—an integrated amp is the way to go. Another plus: Most integrados still use good old knobs and familiar buttons and switches instead of multifunction arrow keys and alphanumeric keypads.

**Expandability and flexibility.** Many integrated amps possess a hidden feature that a majority of receivers do not: independent access to their pre-amp and power-amp sections via rear-panel jacks (usually connected by removable "jumpers") or switches. The benefit is that you can upgrade to a higher-power outboard amplifier and still use the on-board power amp to drive a pair of extension speakers or to biamp a subwoofer/satellite system. It also means you could add a surround-sound processor/preamplifier to your system at a later date and use the integrated amp's power section to drive some of your speakers and an outboard amp for the others.

**Compact size.** Integrated amplifiers tend to take up less space than comparable receivers—especially the A/V variety. "Midi"-size integrated amps, in particular, are worth a serious look because of the surprising levels of power and performance they can offer.

**The surround option.** Only about a dozen of the integrated amps available in the U.S. are multichannel designs with on-board surround-sound decoding and processing. By comparison, there are more than 150 re-
receivers to choose from, and a solid two-thirds of them are A/V designs that include surround-sound facilities. So if plain old two-channel stereo (remember that?) is all you want, you'll likely find a more meaningful selection among the integrated ranks. What's more, if you want a relatively high-power amplifier—let's say more than 100 watts per channel—without A/V features, an integrated model may be your only option.

And if you want to ease into home theater at your own pace, an integrated amp may be an excellent starting point, because it'll let you select a surround processor and additional amplifiers instead of just accepting whatever is built into an A/V receiver.

Audio performance. Most audiophiles would probably agree that at any price level there's an integrated amplifier capable of delivering better performance than a receiver of the same price. There are a number of reasons for this. First, because there is no tuner to worry about, integrated-amp designers can (and often do) pay more attention to power capacity and component quality. Second, the absence of a tuner also means simpler internal electronics. Because there are fewer power-supply circuits, and no RF circuitry at all (nor any video circuitry as in most A/V receivers), the dynamic range is often greater and the ultimate audio signal cleaner. Third, most integrated amps shun the elaborate displays common to receivers these days—another potential noise source.

Variety. With few exceptions, receivers are monotonously similar from brand to brand in terms of features, watts per dollar, and even front-panel layout and styling. The integrated-amp field seems a riot of variety in comparison, with many shapes, sizes, and feature complements—from a 50-watt purist audiophile model for $1,100-plus to a feature-packed 150-watt workhorse for $600 to a basic 60-watter for under $300.

Value. Value means different things to different people. But if you're seeking higher-than-mass-market fidelity at a reasonable price, or elegant simplicity without sacrificing fundamental performance, integrated amps demand a closer look. Sure, you'll probably be able to find a comparably priced receiver that delivers as much power. But you'll be hard pressed to match the add-on/upgrade flexibility of an integrated amplifier.
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1-201-358-4444
WHILE the familiar old analog cassette is still the star of the home-recording show, the number of digital recorders vying for our attention is growing steadily. Digital Compact Cassette (DCC) and MiniDisc (MD) machines are now available from several manufacturers. And, of course, the DAT format is alive and well among high-end audio enthusiasts, musicians, and professional and semi-pro recordists. The following guide contains summary descriptions of more than one hundred analog and digital decks as well as an extensive rundown of analog and digital blank media (we've omitted open-reel equipment and tape, which are used mainly by professionals). The listings are selective because of limited space, so if a particular model or brand does not appear, that is no reflection on its quality. Specifications, features, and prices were provided by the manufacturers, and all prices are “suggested retail”; actual selling prices vary. Now, reset that counter and hit RECORD.

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**AIWA**

XK-S9000 3-Head Cassette Deck

Dolby S, B, C, HX Pro. Features dual 18-bit D/A converters with 8x oversampling; sendust erase head and amorphous record and play heads. 4-motor transport, dual capstans. Digital inputs; mic input. Full logic controls: auto/manual record-level and bias controls; auto tape bias selector; repeat; linear tape counter with tape-end signal; L/R fluorescent peak-level meters; remote control. FR 20-15,000 Hz ±3 dB high bias; S/N (metal) 68 dB Dolby B, 80 dB Dolby C above 5,000 Hz; W&F 0.018% w/m. 18¾ x 6¼ x 20½ in; 31 lb $1,200

**AMD-100 Portable MD Recorder**

Features shock-resistant memory. Fiber-optic digital input and output; mic input. Auto gain control; mic attenuator; SCMS copy-protection system; table-of-contents editing; date and time functions; direct track access; track search; 24-track programming; 4 repeat modes; clock; title display; 24-character LCD with battery-strength indicator. Includes AC adaptor, rechargeable battery, blank disc, interconnect cable, carrying case, and earphones. FR 10-20,000 Hz. 4½ x 1½ x 5½ in; 1.1 lb without battery. $850

**4D-F810 3-Head Cassette Deck**

Dolby B, C, HX Pro. Features double-gap sendust erase head and record and play heads; dual capstans. Direct-in inputs; headphone jack with volume control. IC-logic controls; auto tape-bias selector; auto record mute; repeat; L/R peak-level meters; timer; manual record-level and bias controls. FR 20-13,000 Hz ±3 dB (high bias); S/N (metal) 65 dB Dolby B, 78 dB Dolby C above 5,000 Hz; W&F 0.035%. 17 x 5 x 11½ in; 11 lb. $400

**ARCAM**

Delta 100 3-Head Cassette Deck

Dolby S, B, C. Features amorphous record and play heads; cam-driven 3-motor transport: closed-loop dual-capsule drive; toroidal transformer; nonmagnetic alloy chassis; aluminum front panel. Auto tape-bias selector, bias and record level controls; dual-tape calibration oscillator; peak-level meters. Remote control optional. FR 20-20,000 Hz ±3 dB (high bias); S/N (high bias) 65 dB No NR, 88 dB Dolby S, W&F 0.03%. 17½ x 5 x 13½ in; 18 lb. $1,800

**BANG & OLUFSEN**

Beocord 7000 Cassette Deck

Dolby B, C, HX Pro. Integrates with Beosystem 7000. Front-loading drawer; autoreverse; computer-controlled record-level setting; direct track access; auto playback; NR selection; track programming; music search; auto bias selector; auto space; timer. FR 30-18,000 Hz ±3 dB (high bias); S/N (high bias) 65 dB Dolby B, 74 dB Dolby C; W&F 0.09%. Polished-aluminum or white finish. 16½ x 3 x 12½ in; 19 lb. $1,250

Beocord 4500 Cassette Deck

Dolby B, C, HX Pro. Integrates with Beosystem 4500. Front-loading drawer; autoreverse; computer-controlled record-level setting; direct track access; auto playback; NR selection; track programming; music search; auto bias selector; auto space; timer. FR 30-18,000 Hz ±3 dB (high bias); S/N (high bias) 65 dB Dolby B, 74 dB Dolby C; W&F 0.09%. Polished-aluminum finish with white trim. 16½ x 3 x 12½ in; 19 lb. $1,250

**BANG & OLUFSEN**

Beocord 7000 Cassette Deck

Dolby B, C, HX Pro. Integrates with Beosystem 7000. Front-loading drawer; autoreverse; computer-controlled record-level setting; direct track access; auto playback; NR selection; track programming; music search; auto bias selector; auto space; timer. FR 30-18,000 Hz ±3 dB (high bias); S/N (high bias) 65 dB Dolby B, 74 dB Dolby C; W&F 0.09%. Polished-aluminum or white finish. 16½ x 3 x 12½ in; 19 lb. $1,250
**CARVER**

**TD-1770 3-Head Cassette Deck**
Doby B. C, HX Pro. Features metal alloy record and play heads; MPX filter. Headphone jack. Full-logic controls; adjustable bias; auto tape-bias selector; record-balance control; blank slip-play record mode; program play and search; repeat; two fluorescent peak-level meters; digital real-time counter; timer; remote control. FR 20-19,000 Hz ±3 dB; S/N 75 dB Dolby C; W&F 0.05%. 19 x 5/8 x 12 1/8 in; 15 lb. $600

**TDR-1550 Cassette Deck**
Doby B. C, HX Pro. Features oxygen-free recording/playback-head core; MPX filter. Headphone jack with volume control. Auto-rewind; full-logic controls; adjustable bias; auto tape-bias selector; program search; repeat; two fluorescent meters; digital real-time counter; record mute; timer; peak-hold meter; remote control. FR 20-18,000 Hz ±3 dB; S/N 75 dB Dolby C; W&F 0.05%. 19 x 5/8 x 12 1/8 in; 15 lb. $600

**DENON**

**Analog Cassette Decks feature adjustable bias, auto space, a headphone jack, and compatibility with Denon's IS-system remote control.**

**DTR-80P Portable DAT Recorder**
8x oversampling, dual 18-bit AI hybrid multi/1-bit D/A converters, dual sigma-delta A/D converters. Features 20-bit digital filter. Fiber-optic/coaxial digital inputs; coaxial digital output; analog mini-jack line-level input and output; headphone jack. 120x fast-wind and search speeds; 3-10x cue/review speed; peak-hold meters; backlight LCD. Operates on 4 alkaline batteries for 3/4 hr recording or 4 hr playback time. Includes AC adaptor. Sampling rates 48,000, 44,100, and 32,000 Hz. FR 20-22,000 Hz ±0.5 dB; S/N 90 dB; THD 0.008%; dynamic range 90 dB. $900

**RC-423 Wired Remote Control**
$40

**DRS-810 3-Head Cassette Deck**
Doby B. C, HX Pro. Features horizontal-loading tape drawer; Super Permalloy combination head in die-cast aluminum base, dual-caps 3-motor transport; ceramic-composite stabilizer; dual power supplies. Tape-bias selector; auto tape-monitor function; program search; record-balance control; peak-hold fluorescent meters; linear time counter with remaining-time display. FR 20-20,000 Hz ±3 dB; S/N 75 dB Dolby C; W&F 0.05%. $500

**DRM-740 3-Head Cassette Deck**
Doby B. C, HX Pro. Features Super Permalloy combination head in die-cast aluminum base; dual-caps 3-motor transport; dual power supplies. Synchro record with compatible CD players; auto tape-bias selector; program search; record-balance control; peak hold fluorescent meters. FR 20-20,000 Hz ±3 dB; S/N 75 dB Dolby C; W&F 0.038%. $400

**DRW-840 Double Cassette Deck**
Doby B. C, HX Pro. Features rolling amorphous heads; 2-motor transports with non-slip reel drive; dual power supplies. Auto-verse for both transports; high-speed dubbing; auto tape-bias selector; program search; record-balance control; 2-cassette simultaneous record and sequential play; two fluorescent meters; synchro record with compatible CD players; peak-reading fluorescent meters. FR 20-19,000 Hz ±3 dB metal; S/N 74 dB Dolby C; W&F 0.06%. $400

**DRW-660 Double Cassette Deck**
Doby B. C, HX Pro. Computer-controlled transports; dual power supplies; recording/playback function. Auto-verse; high-speed dubbing; 2-cassette sequential play; synchro record with compatible CD players; auto tape-bias selector; program search; level meters. FR 20-19,000 Hz ±3 dB metal; S/N 74 dB Dolby C; W&F 0.07%. $300

**DRR-740 Cassette Deck**
Doby B. C, HX Pro. Computer-controlled 2-motor transport with non-slip reel drive; dual power supplies; recording/playback function. Auto-verse; synchro record with compatible CD players; auto tape-bias selector; program search; level meters. FR 20-19,000 Hz ±3 dB metal; S/N 74 dB Dolby C; W&F 0.06%. $300

**DRE-640 Cassette Deck**
Doby B. C, HX Pro. Features horizontal-loading tape drawer; computer-controlled 2-motor transport; ceramic-composite stabilizer; dual power supplies. Synchro record with compatible CD players; auto tape-bias selector; program search; record-balance control; peak-hold fluorescent meters; linear time counter with remaining-time display. FR 25-18,000 Hz ±3 dB metal. $300

**DRE-540 Cassette Deck**
Doby B. C, HX Pro. Features computer-controlled 2-motor transport with non-slip reel drive; Super Permalloy head; dual power supplies; switchable MPX filter. Synchro record with compatible CD players; auto tape-bias selector; program search; record-balance control; adjustable bias; digital tape counter; fluorescent display with peak-level meters. FR 25-18,000 Hz ±3 dB metal; S/N 74 dB Dolby C; W&F 0.05%. $525

**JVC**

**CC-S859RC Cassette Deck**
Doby B. C, HX Pro. Features amorphous microcassette playback; computer-controlled 2-motor drive. Headphone jack. Adjustable bias; auto tape-bias selector; program search; electronic counter with memory; level display with peak hold; record mute; balance control; repeat. W&F 0.05% wms. $505

**CC-S865RC Cassette Deck**
Doby B. C, HX Pro. Features computer-controlled 2-motor transport; level meters. Auto-verse; adjustable bias; auto tape-bias selector; program search; record mute; timer. $340

**FISHER**

**CR-W983 Double Cassette Deck**
Doby B. C, HX Pro. Headphone jack. Full-logic controls for both transports; high-speed dubbing; 2-cassette sequential play; auto tape-bias selector. FR 50-16,000 Hz ±3 dB high bias; S/N 62 dB Dolby B, 70 dB Dolby C. W&F 0.1% wms, THD 1.2%. 16/5 x 5/4 x 10 in; in 9 lb. $200

**CR-W603 Double Cassette Deck**
Doby B. Headphone jack. Auto-verse on one transport; normal/high-speed dubbing; 2-cassette sequential play; L/R recording controls; auto tape-bias selector; dual 5-LED level meters. FR 50-14,000 Hz ±3 dB high bias; S/N 62 dB Dolby B, 54 dB no NR. W&F 0.18% wms, THD 1.5% 16/5 x 5/4 x 10 in; in 9 lb. $150

**HARMAN KARDON**

The following feature jacks for Harman Kardon's IS-system remote control:

**DCS-500 Double Cassette Deck**
Doby B. C, HX Pro. Features hard-Permalloy heads; separate motors for capstans and reels; discrete record/play circuitry; switchable MPX filter. Auto tape-bias selector; program search; intro scan; adjustable bias; linear time counter; dual LED peak meters. FR 20-20,000 Hz ±3 dB high bias; S/N (high bias) 57 dB no NR, 65 dB Dolby B, 73 dB Dolby C; W&F 0.05% wms, 17/7 x 5/4 x 13 in; 12 lb. $499

**TD4400 Cassette Deck**
Doby B. C, HX Pro. Features 2 isotropic heads; separate motors for capstans and reels; discrete record/play circuitry; switchable MPX filter. Auto tape-bias selector; program search; intro scan; adjustable bias; linear time counter; dual LED peak meters. FR 20-20,000 Hz ±3 dB high bias; S/N (high bias) 57 dB no NR, 65 dB Dolby B, 73 dB Dolby C; W&F 0.05% wms, 17/7 x 5/4 x 13 in; 12 lb. $499

**TD1400 Cassette Deck**
As above, without Dolby HX Pro, program search, or intro scan. Features 2 hard-Permalloy heads. $329

**JVC**

**XD-E807TN DAT Recorder**
1-bit PEM/D A converter, 1-bit A/D converter. Features 4th-order noise-shaping. Long and standard play modes, SCMS copy-protection system. Analog, fiber-optic, and coaxial inputs and outputs. Headphone Jack. Auto ID edit. 2 read modes; remote control. FR 2-22,000 Hz ±0.5 dB standard play, 2-14,500 Hz ±0.5 dB long play; S/N 91 dB standard play. 17/7 x 5/4 x 13 in; 16 lb. $1,000

**TD-V605TN 3-Head Cassette Deck**
Doby B. C, HX Pro. Features closed-loop dual-capstan design with direct-drive motor; powered cassette lid; switchable MPX filter. Headphone jack with volume control; DC direct input. Full-logic controls; adjustable bias; peak search; fluorescent peak-display/level meters; auto record mute; timer/record play; auto record-level adjustment with compatible CD player. auto tape-bias selector; balance control; Compu Link system compatibility. $420

**TD-R44TN Cassette Deck**
Doby B. C, HX Pro. Features powered cassette lid; auto record-level adjustment with compatible CD player. CD direct input; headphone jack. Full-logic controls; auto-verse; adjustable bias; auto record mute; timer/record play; auto tape-bias selector; balance control; fluorescent peak-display/level meters; Compu Link system compatibility. $280

**Double Cassette Decks**

**TD-W805TN Double Cassette Deck**
for both transports: computer-controlled full-
logic controls, high-speed dubbing; adjustable bias; auto/switchable peak-display/level meters; auto/synchro record mute; timer/recording play; auto tape-bias selector; auto record-level adjustment with compatible CD player; Compur Link system compatibility...

$370

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**TD-W709TN Double Cassette Deck**

Dolby B, C, HX Pro. Features headphone jack; autoreverse record/play for both transports; full-logic controls; auto record-level adjust with compatible CD player; high-speed dubbing; switchable fluorescent peak-display/level meters; auto/synchro record mute; auto tape-bias selector; balance and pitch controls; Compur Link system compatibility...

$350

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**TD-W309TN Double Cassette Deck**

Dolby B, C, HX Pro. Headphone jack. Full-logic controls; autoreverse record/play for one transport only; full-logic controls; auto record-level adjust with compatible CD player; high-speed dubbing; switchable fluorescent peak-display/level meters; auto/synchro record mute; auto tape-bias selector; pitch control; auto record-level adjust with compatible CD player; high-speed dubbing; switchable fluorescent peak-display/level meters; system remote-control compatibility...

$820

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**KENWOOD**

**KX-5550 Cassette Deck**

Dolby B, C, HX Pro. Features 3-motor mechnanism; tape-path stabilizer: MPX filter. Full-logic controls; autoreverse: auto bias adjustment; bias preset memory: synchro record with compatible cassette decks: A/B repeat: timer: program scan: L/R record-level/balance controls: fluorescent level meters; system remote-control compatibility...

$299

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**Double Cassette Decks**

The following feature synchro normal/high-speed recording with compatible CD players.

**KX-W5080 Double Cassette Deck**

Dolby B, C, HX Pro for both transports. Features switchable MPX filter. Headphone jack. Autoreverse record/play for both transports: 2-cassette simultaneous/sequential record; 2-cassette sequential play; auto bias adjustment for both transports: index scan for one transport: program scan: blank skip: repeat: high-speed dubbing; auto tape-bias selector: fluorescent rect-level meters; system remote-control compatibility. FR 20-18,000 Hz ±3 dB high bias; S/N 65 dB Dolby B, 72 dB Dolby C, 57 dB no NR. W&F 0.06% wmrns. 11 lb...

$299

**KX-W6090**

As above with Dolby HX Pro for one transport, one tape counter, auto MPX-filter switching. No auto bias adjustment, simultaneous record, or blank skip. FR 25-16,000 Hz ±3 dB high bias; S/N 68 dB Dolby B, 74 dB Dolby C, 52 dB no NR. W&F 0.09% wmrns...

$329

**KX-W4080 Double Cassette Deck**

Dolby B, C for one transport. Features switchable MPX filter. Headphone jack. One transport: autoreverse record/play, other autoreverse play-only: 2-cassette sequential play, index scan for one transport: high-speed dubbing; auto tape-bias selector; system remote-control compatibility. FR 25-16,000 Hz ±3 dB high bias; S/N 66 dB Dolby B, 73 dB Dolby C, 52 dB no NR. W&F 0.09% wmrns. 10 lb...

$199

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**MARANTZ**

**DD-92 DCC Recorder**

Dual 18-bit A/D converters, 1-bit PDM D/A conversion. Features motor-driven volume control. Variable and fixed line-level outputs: RC-5 system remote-control interface. Analog-cassette playback compatibility with Dolby B and C NR; DCC text-information display including track and time for home recordings; real-time counter with absolute-, track-, and remaining-time displays: 5-switchable record markers: 3-repeat modes: blank skip: program search. Synchro record with compatible CD players. Remote control. Sampling rates 32,000, 44,100, and 48,000 Hz. Gold finish with die-cast alloy side panels...

$1,199

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**SD-725 Double Cassette Deck**

Dolby B, C, HX Pro. For both transports. Autoreverse record/play for both transports; full-logic controls; switchable MPX filter; 2-cassette simultaneous/sequential record: intro scan: program scan: blank skip: repeat: program scan: blank skip: high-speed dubbing; synchro record with compatible CD players; adjustable bias; switchable fluorescent peak-display/level controls; remote control. FR 20-18,000 Hz ±3 dB high bias; S/N 59 dB high bias, no NR. W&F 0.06% wmrns. 17% x 4/5 x 11 in; 21 lb...

$649

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**SD-63 3-Head Cassette Deck**

Dolby B, C, HX Pro. Features double-gap ferite erase head; high-Magnetollum record and erase heads: dynamically balanced alloy flywheel. Microprocessor logic controls: tape edit: synchro record with compatible CD players: adjustable bias; switchable fluorescent peak-display/level controls; remote control. FR 20-17,000 Hz ±3 dB high bias; S/N (high bias) 58 dB no NR. 68 dB Dolby B, 78 dB Dolby C. W&F 0.05%. 16/5 x 5/5 x 13 in; 18 lb...

$399

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**SD-525 Double Cassette Deck**

Dolby B, C, HX Pro. Features dual-gap ferite erase head; DC servo-controlled capstans and reels. RC-5 system remote-control interface. One transport autoreverse record/play, one autoreverse play-only; full-logic controls; synchro record with compatible CD players: intro scan: program scan: blank skip: high-speed dubbing; fluorescent peak-display/level with peak hold remote control. FR 20-17,000 Hz ±3 dB high bias, no NR; S/N 60 dB high bias, no NR. W&F 0.06% wmrns. 16/5 x 4/5 x 11 in; 12 lb...

$399

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**SD-52R Cassette Deck**

Dolby B, C, HX Pro. Features dual-gap ferite erase head; DC servo-controlled tape-drive motor and separate DC motor for fast winds; dynamically balanced alloy flywheel; dual-azimuth head adjustment; switchable fluorescent filters. RC-5 system remote-control interface. Autoreverse: full-logic controls: synchro record with compatible CD players: peak-display/level with peak hold remote control. FR 30-18,000 Hz ±3 dB high bias, no NR; S/N 50 dB high bias, no NR. W&F 0.06% wmrns. 16/5 x 4/5 x 11 in; 11 lb...

$349

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**SD-52**

As above, without autoreverse. Features 4 switchable record markers. FR 30-20,000 Hz ±3 db high bias, no NR...

$299

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**NAD**

**Model 6100 Monitor Series Cassette Deck**

Dolby B, C, HX Pro. Features switchable MPX filter. Dyneq range expansion. Play Trim control to optimize high-frequency characteristics of Dolby-encoded recordings; full-logic controls: car-stereo adjustable bias; remote control. FR 30-19,000 Hz ±3 dB; S/N 67 dB Dolby B, 77 dB Dolby C. 57 dB no NR. W&F 0.06%. 17% x 4/5 x 10 3/4 in; 10 lb...

$499

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**Model 602 Cassette Deck**

Dolby B, C, HX Pro. Full-logic controls: LED record-level meter. FR 19 dB S/N 66 dB Dolby B, 76 dB Dolby C. W&F 0.06%. 16/5 x 5/10 x 10 in; 10 lb...

$299

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**Marantz SD-92**

**Model 1000 DAT Recorders**

Features 4-head design for off-tape monitoring; microprocessor-controlled, direct-drive motor. Coaxial/fiber-optic digital input/output. Indexing: program search: digital fader: remote control. Includes coaxial and fiber-optic cables. Sampling rates 48,000, 44,100, and 32,000 Hz. 17% x 5/4 x 14/5 in; 21 lb...

$5,900

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**Dragon 3-Head Cassette Deck**

Dolby B, C. Features microprocessor control; auto azimuth-correction system; discrete Crystalboard record and playback heads; direct-drive motors; direct-coupled record and play amps: auto-retracting slot guides: tape-pilfer; auto tape-slack-reducing mechanism. Headphone jack. Autoreverse: level record and bias controls: 2-tone test oscillator: separate tape-bias and EQ switches: 2-speed cueing and fader: auto record pause; left, right, and master input-level controls: output-level control; record mute: defeatable infraction filter; electronic counter with memory. Repeat. FR 20-22,000 Hz ±3 dB, S/N 66 dB Dolby B, 72 dB Dolby C. W&F 0.019% wmrns. 17% x 5/4 x 11 in; 21 lb...

$2,599

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**CR-7A 3-Head Cassette Deck**

Dolby B, C. Features dual capstans; 3 motors: discrete Crystalboard record and playback heads: manual azimuth adjust. Headphone jack. Output-level control; memory stop/play; record mute; auto/manual tape-bias/EQ selection; auto fade; repeat: fluorescent meters: real-time counter; remote control. FR 18-21,000 Hz ±3 dB high bias; S/N (metal) 66 dB Dolby B, 72 dB Dolby C. W&F 0.027% wmrns. 17% x 5/5 x 12 in; 20 lb...

$1,899

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**DR-1 3-Head Cassette Deck**

Dolby B, C. Features multiregulated power supply: adjustable play-head azimuth, dual capstans; DC servo-capstan motor; auto slack take-up; integrated construction of head and playback amp. Gold-plated inputs and outputs. Bidirectional auto search: adjustable bias; repeat; timer; record mute; output-level control: tape-bias selector with interlocked EQ selection: fluorescent display; 4-digit counter: system remote-control compatibility. FR 20-21,000 Hz ±3 dB, S/N (metal) 66 dB Dolby B, 72 dB Dolby C. W&F 0.019% wmrns. 17 x 4 x 12% in; 12 lb...

$929

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**SD-2**

As above, no adjustable azimuth, output-level control, or gold-plated connectors...

$749
**HOME RECORDING EQUIPMENT**

**ONKYO**

The following feature Onkyo RI-system remote-control compatibility

Integra TA-2000 3-Head Cassette Deck
Dolby B, C, HX-Pro. Features 3-motor microcomputer-controlled transport; transport: closed-loop dual-capstan drive; isolated transformer; linear power supply: discrete power-supply regulators: switchable MPX filter. Synchro record with compatible CD players; repeat: program search; auto space; master and balance input-level controls; 4-digit counter; fluorescent peak-level display; digital time display; total/selection elapsed-time display; 12-track programming; program search; 15-track skip.

TA-R401 Cassette Deck
Dolby B, C, HX-Pro. Features switchable MPX filter. Full-logics controls: autoreverse; auto tape-bias selector; flexible control record; sequential play/record. Remain-time indicator: counter; remaining-time indicator; FR: 20-18,000 Hz high bias: W & F 0.04% rms. 18 x 5/4 x 14/4; 15 lb...$530

TA-203 Cassette Deck
Dolby B, C, HX-Pro. Features switchable MPX filter. Headphone jack. Full-logics controls: synchro record with compatible CD players; 4-digit counter: fluorescent peak-level display; peak-level indicator: remote control: FR 20-18,000 Hz high bias: W & F 0.07% rms. 18 x 4 x 12 1/2 in; 11 lb...$380

TA-R301 Cassette Deck
Dolby B, C, HX-Pro. Features switchable MPX filter. Headphone jack. Full-logics controls: autoreverse; synchro record with compatible CD players; auto tape-bias selector; block repeat; auto space: master and balance input-level controls: fluorescent display with peak-level indicator: peak hold: FR 20-18,000 Hz high bias: W & F 0.07% rms. 18 x 4 x 12 1/2 in; 11 lb...$320

**PIONEER**

Auto BLE and Super Auto BLE refer to Pioneer's computer-controlled auto bias, level, and EQ optimization circuitry.

Elite CT-43 3-Head Cassette Deck
Dolby S, C, HX-Pro. Features Super Auto BLE: centered tray orientation; 3 motors; dual capstans, digital tension control: cassette sublizer: isolated door; MPX filter. Headphone jack with volume control. Synchro record with compatible CD players: 15-track program search; powered eject; user-adjustable bias; timer record/play: defeatable fluorescent display with counter; remaining-time indicator. FR 15-21,000 Hz; W & F 0.002%; 17 1/2 x 14 3/4 in; 24 lb...$650

CT-WM62R 7-Cassette Changer
Dolby B, C, HX-Pro. For 6-cassette changer: 6-cassette record/play changer plus play-only single-cassette transport. Features FLEX, proprietary high-frequency restoration circuitry. Autoreverse for all transports; memory for user settings; powered load-eject; MPX filter: individual NR selection for each cassette: 6-cassette sequential record/play, simultaneous rewind, and random play: cassette scan; 15-track skip search: blank skip; auto space; normal/high-speed dubbing: synchro record with compatible CD players; auto reverse record/play. Serial/parallel sequential play/record; remaining-time indicator; digital 4-digit time/tape fluorescent counter: fluorescent peak-level meter: SR-system re-

**PHILIPS**

The following feature Philips's Enhanced System Intelligence bus that enables communications among 900 Series components.

DCC900 DCC Recorder
1-bit Bitstream A/D and D/A conversion. Features autoreverse: motor-driven cassette loading. Headphone jack with volume control. Analog-cassette playback compatibility with Dolby B and C NR; 12-character fluorescent text display: synchro record with compatible CD players; record balance and level controls; time record/play: level meters: remote control...$800

DCC130 Portable DCC Player
Headphone jack. Analog-cassette playback compatibility with Dolby B NR; autoreverse: 12-character fluorescent text display. Includes AC adapter, headphones, remote control, carrying case, and rechargeable battery. FR 20-20,000 Hz: THD 0.003%; S/N 50 dB; dynamic range 108; ch sep 90 dB. 4 1/2 x 1 3/4 x 4 1/4 in; 11 lb...$550

**PIONEER**

Auto BLE and Super Auto BLE refer to Pioneer's computer-controlled auto bias, level, and EQ optimization circuitry.

Elite CT-43 3-Head Cassette Deck
Dolby S, C, HX-Pro. Features Super Auto BLE: centered tray orientation; 3 motors; dual capstans, digital tension control: cassette sublizer: isolated door; MPX filter. Headphone jack with volume control. Synchro record with compatible CD players: 15-track program search; powered eject; user-adjustable bias; timer record/play: defeatable fluorescent display with counter; remaining-time indicator. FR 15-21,000 Hz; W & F 0.002%; 17 1/2 x 14 3/4 in; 24 lb...$650

CT-WM62R 7-Cassette Changer
Dolby B, C, HX-Pro. For 6-cassette changer: 6-cassette record/play changer plus play-only single-cassette transport. Features FLEX, proprietary high-frequency restoration circuitry. Autoreverse for all transports; memory for user settings; powered load-eject; MPX filter: individual NR selection for each cassette: 6-cassette sequential record/play, simultaneous rewind, and random play: cassette scan; 15-track skip search: blank skip; auto space; normal/high-speed dubbing: synchro record with compatible CD players; auto reverse record/play. Serial/parallel sequential play/record; remaining-time indicator; digital 4-digit time/tape fluorescent counter: fluorescent peak-level meter: SR-system re-
H O M E  R E C O R D I N G  E Q U I P M E N T

Elite CT-W53 Double Cassette Deck
Dolby B, C, HX Pro. Features Super Auto BLE, MPX filter. Headphone jack with volume control. Record calibration: left, right stereo, left, right mono. Features: 18-bit recording; 16-track program search; repeat; program search; auto record mute; 2 -cassette sequential play; record calibration: left, right stereo, left, right mono. Headphone Jack. Features: switchable MPX filter. 17 x 5 x 10'/2 in; 11 lb......$490

DD-2010C Double Cassette Deck
Dolby B, C, HX Pro. Headphone jack. One transport autoreverse record/play; full-logics controls; program search; blank skip: 2 -cassette sequential play; timer; auto tape-bias selector: 25 mm track/dd; 2-electronic counter; linear tape counter; remote control: 15 lb......$250

DD-TS645S Double Cassette Deck
Dolby B, C, HX Pro. Features Permalloy head; switchable MPX filter; dual 2 -motor transports. Autoreverse for both transports; auto record calibration: 2 -cassette sequential play; program search; auto play; normal/high-speed dubbing; balance control: record mute; 2 electronic counters: 14 -segment fluorescent display: remote control compatibility......$330

DTC-690 DAT Recorder
Pulse-type A/D and D/A converters. Coaxial and fiber-optic digital inputs: analog inputs and outputs. Fiber-optic digital output. Features: 3 -motor direct-drive transport. Headphone jack. Standard and long play modes: subcode start, stop, and skip management: direct track access: absolute/remaining-time displays: remote control. FR 22-22,000 Hz ±0.5 dB standard play. 2-14,500 Hz ±0.5 dB long play; S/N 90 dB; dynamic range 90 dB; THD (at 1,000 Hz) 0.005% standard play. 17 x 3/4 x 14 in......$700

MD-101 MD Recorder
Features: Gallium-aluminum-arsenic double-het-
rodiode laser. Line-level inputs and outputs; fiber-optic digital input and output; headphone jack. Auto scan for blank space; ability to create up to 25 cueing points: ability to combine two or more tracks into one: track/disc erase: track reordering: ability to store 1,700 characters of information per disc; random play: repeat; remote control. Includes blank disc and interface cable. Sampling rate 44,100 Hz. 9 x 3 11/16 in; 6 lb......$1,000

MD-501 MD Recorder
Pulse-type A/D and D/A converters. Coaxial and fiber-optic digital inputs: analog inputs and outputs. Fiber-optic digital output. Features: 3 -motor direct-drive transport. Headphone jack. FR 22-22,000 Hz ±0.5 dB standard play. 2-14,500 Hz ±0.5 dB long play; S/N 90 dB; dynamic range 90 dB; THD (at 1,000 Hz) 0.005% standard play. 17 x 3/4 x 14 in......$1,000

DTC-690 DAT Recorder
Pulse-type A/D and D/A converters. Coaxial and fiber-optic digital inputs: analog inputs and outputs. Fiber-optic digital output. Features: 3 -motor direct-drive transport. Headphone jack. Standard and long play modes: subcode start, stop, and skip management: direct track access: absolute/remaining-time displays: remote control. FR 22-22,000 Hz ±0.5 dB standard play. 2-14,500 Hz ±0.5 dB long play; S/N 90 dB; dynamic range 90 dB; THD (at 1,000 Hz) 0.005% standard play. 17 x 3/4 x 14 in......$700

TC-WR545 Double Cassette Deck
Dolby B, C, HX Pro. Features Permalloy head; switchable MPX filter; dual 2 -motor transports. Autoreverse for both transports; auto record calibration: 2 -cassette sequential play; program search; auto play; normal/high-speed dubbing; balance control: record mute; 2 electronic counters: 14 -segment fluorescent display: remote control compatibility......$250

ES Series
The following feature a switchable MPX filter: program search, record mute, level and balance controls, and Sony receiver remote control compatibility.

DD-2010C Double Cassette Deck
Dolby B, C, HX Pro. Headphone jack. One transport autoreverse record/play; full-logics controls; program search; blank skip: 2 -cassette sequential play; timer; auto tape-bias selector: 25 mm track/dd; 2-electronic counter; linear tape counter; remote control compatibility. FR 35-16,000 Hz ±3 dB high bias; S/N 64 dB Dolby B, 73 dB Dolby C; W&F 0.07%......$225

DD-M519 DAT Recorder
Features: 18 -output 90-MHz D/A converter in complementary configuration: 4 heads; 4 direct-drive motors. Super Bit Mapping. 44.100 Hz......$950

S A N S U
D-1717VR Cassette Deck
Dolby B, C, HX Pro. Features switchable MPX filter. HeadphoneJack. CD-direct input. Full-logics controls: one transport autoreverse record/play; other transport play-only: 16-track program search: record mute: 2 -cassette sequential play: timer; auto tape-bias selector: 25 mm track/dd; 2-electronic counter: linear tape counter; remote control compatibility. 17 x 5 x 10'/16 in; 11 lb......$340

D-1717VR Cassette Deck
Dolby B, C, HX Pro. Features switchable MPX filter. HeadphoneJack. CD-direct input. Full-logics controls: one transport autoreverse record/play; other transport play-only: 16-track program search: record mute: 2 -cassette sequential play: timer; auto tape-bias selector: 25 mm track/dd; 2-electronic counter: linear tape counter; remote control compatibility. 17 x 5 x 10'/16 in; 11 lb......$340

D-1717VR Cassette Deck
Dolby B, C, HX Pro. Features switchable MPX filter. HeadphoneJack. CD-direct input. Full-logics controls: one transport autoreverse record/play; other transport play-only: 16-track program search: record mute: 2 -cassette sequential play: timer; auto tape-bias selector: 25 mm track/dd; 2-electronic counter: linear tape counter; remote control compatibility. 17 x 5 x 10'/16 in; 11 lb......$340

S H A R P
MD-M11 Portable MD Recorder
Features analog input, mic input (microphone optional), optical digital input/output (cables optional): headphone jack: multiple editing functions: recordable battery (can recharge during use): anistashock memory buffer: scrolling display: bass boost: random play: skip/search. Includes headphones. Sampling rate 44.1 kHz: FR 20-20,000 Hz ±3 dB. 3'7/8 x 1'/4 x 3'/4 in; 10.6 oz with battery......$500

RECORDING

G E N E R A L  E Q U I P M E N T

Sherwood Digi-Link II system remote-control compatibility. Includes blank disc and interface cable. Sampling rate 44,100 Hz. 9 x 3 11/16 in; 6 lb......$1,000

ROTEL
K-655SX. Dolby B, C, HX Pro. Features: 18-bit fine-tune; music search; repeat; fluorescent peak-level meter; 3-digit cent peak-hold level meter; SR -system remote-control compatibility. 163/4 x 43/4 x 143/4; 13 lb......$400

T C-W502R Double Cassette Deck
Dolby B, C, HX Pro for both transports. Features: Super Auto BLE for both transports; MPX filter. Headphone Jack. Autoreverse record/play for both transports: EQ-enhancement preset for portable/car applications: 15-track skip search: auto space: blank skip: auto record calibration; linear tape counter; fluorescent display: high-speed dubbing: timer: auto tape-bias selector: two 4 -digit digital tape/time counters; fluorescent peak-hold level meters; SR -system remote-control compatibility. 171/4 x 5 x 93/4 in; 11 lb......$270

SONY
MD-101 MD Recorder
Features: Gallium-aluminum-arsenic double-hetero-
rodiode laser. Line-level inputs and outputs; fiber-optic digital input and output: headphone jack. Auto scan for blank space; ability to create up to 25 cueing points: ability to combine two or more tracks into one: track/disc erase: track reordering: ability to store 1,700 characters of information per disc: random play: repeat; remote control. Includes blank disc and interface cable. Sampling rate 44,100 Hz. 9 x 3 11/16 in; 6 lb......$1,000

MD-501 MD Recorder
Pulse-type A/D and D/A converters. Coaxial and fiber-optic digital inputs: analog inputs and outputs. Fiber-optic digital output. Features: 45-bit digital filter. Fiber-optic and analog inputs and outputs. 100-channel alphanumeric track and disc titling: date function; track, disc, and title erase modes; edit functions including editing machine, and move; auto space: record-level control: 25-track programming: random play: 3 repeat modes: track scan: remote control......$950
TEAC

V-9000S 3-Head Cassette Deck
Dolby B, C, X Pro. Features quartz-locked dual-capsule drive; centered cassette well; anti-static cassette stabilizer. Gold-plated line-level inputs and outputs; CD-direct input; headphone jack with volume control; independent L/R bias and level controls; ±25% bias range; synchro record with compatible CD players; test oscillator; record muting; auto space; tape bias selector; timer; remote control.
FR 15-20,000 Hz ±3 dB high bias; S/N 70 dB Dolby B, 80 dB Dolby C; W&F 0.002% wrms. 17% x 5% x 14 in; 14 lb $5,000

V-5010 3-Head Cassette Deck
Dolby B, C, X Pro. Features copper-plated steel chassis; cobalt-amorphous head with PC-OCC wiring; auto-tape bias selector; auto record mute; timer; L/R peak meters; program search; L/R peak meters; remote control compatibility with Technics receivers. FR 25-19,000 Hz ±20 dB high bias; S/N 70 dB Dolby B, 80 dB Dolby C; W&F 0.007% wrms. 17% x 5% x 14 in; 14 lb $7,000

V-2020S 3-Head Cassette Deck
Dolby B, C, X Pro. Features aluminum front panel; centered cassette well; bias and level calibration system with test-tone oscillator; fluorescent display; remote control.
FR 15-20,000 Hz ±3 dB high bias; S/N 70 dB Dolby B, 80 dB Dolby C; W&F 0.045% wrms. 17% x 5% x 14 in; 14 lb $4,000

Double Cassette Decks

W-6000R Double Cassette Deck
Dolby B, C, X Pro for both transports. Features Permalloy record/play rotating-head autoreverse for both transports. Headphone jack; IC-logic controls; auto record-level adjust; 2-cassette sequential play; audio fader; repeat: normal/medium/dubbing; blank skip for one transport; autoreverse record/play; 1-cassette simultaneous play. FR 25-19,000 Hz ±20 dB high bias; S/N 69 dB Dolby B, 79 dB Dolby C; W&F 0.06% wrms. 17% x 5% x 14 in; 14 lb $5,000

W-800R Double Cassette Deck
Dolby B, C, X Pro for both transports. Features autoreverse record/play for both transports; program search. Two electronic counters; fluorescent display; remote control $3,700

W-700R Double Cassette Deck
Dolby B, C, X Pro for both transports. Features Permalloy record/play head; rotating-head autoreverse. Headphone jack; IC-logic controls; one transport autoreverse record/play; dull-fluorescent display; repeat: record muting; auto space; timer; L/R peak meters; auto tape bias selector; remote control compatibility with Technics receivers. FR 25-19,000 Hz ±20 dB high bias; S/N 69 dB Dolby B, 79 dB Dolby C; W&F 0.06% wrms. 17% x 5% x 14 in; 14 lb $3,700

RS-TR797 Double Cassette Deck
Dolby B, C, X Pro. Full-logic controls: one transport autoreverse record/play; one transport only; auto tape calibration; 1-cassette simultaneous record; 2-cassette simultaneous record; remote control compatibility with Technics receivers. FR 40-15,000 Hz ±3 dB high bias; S/N 66 dB Dolby B, 74 dB Dolby C; W&F 0.01%; 17% x 5% x 11 in; 12 lb $999

RS-TR777 Double Cassette Deck
Dolby B, C, X Pro. Full-logic controls; one transport autoreverse record/play; one transport only; auto tape calibration; 1-cassette simultaneous record; 2-cassette simultaneous record; program search; fluorescent display; remote control compatibility with Technics receivers. FR 40-15,000 Hz ±3 dB high bias; S/N 66 dB Dolby B, 74 dB Dolby C; W&F 0.01%; 17% x 5% x 11 in; 12 lb $1,500

RS-RX606 3-Head Cassette Deck
Dolby B, C, X Pro. Features digital-servo direct-drive transport; Class AA record amp; PC-OCC coils; switchable MX filter. Headphone jack with volume control. Full-logic controls; program search: adjustable bias: auto-tape bias selector; remote control; tape muting: timer; peak hold; S/N (high bias) 77 dB no NR; 66 dB Dolby B, 74 dB Dolby C; W&F 0.1%; 17% x 5% x 11 in; 10 lb $3,200

RS-RS535 Double Cassette Deck
Dolby B, C, X Pro. Features autoreverse record/play for both transports; 2-cassette simultaneous record and sequential record; fluorescent display; 2-cassette simultaneous record; adjustable bias: program search; dual fluorescent display; remote control compatibility with Technics receivers. FR 40-15,000 Hz ±3 dB high bias; S/N 66 dB Dolby B, 74 dB Dolby C; W&F 0.01%; 17% x 5% x 11 in; 10 lb $3,000

RS-TR465 Cassette Deck
Dolby B, C, X Pro. Features dual-transport autoreverse record/play; fluorescent display; remote control; fluorescent display; remote control; CD-direct drive transport; Class AA record amp; PC-OCC coils; switchable MX filter. Headphone jack with volume control. Full-logic controls; program search: fluorescent display; remote control compatibility with Technics receivers. FR 40-15,000 Hz ±3 dB high bias; S/N 66 dB Dolby B, 74 dB Dolby C; W&F 0.01%; 17% x 5% x 11 in; 10 lb $2,700

RS-TR333 Double Cassette Deck
Dolby B, C, X Pro. Full-logic controls: one transport autoreverse record/play; one transport only; high-speed dubbing: adjustable bias: program search; fluorescent display; remote control compatibility with Technics receivers. FR 40-15,000 Hz ±3 dB high bias; S/N 66 dB Dolby B, 74 dB Dolby C; W&F 0.01%; 17% x 5% x 11 in; 10 lb $2,200

Technics

RS-DC10 DCC Recorder
Features servo-controlled 2-motor transport; optical sensor for end-of-tape and auto DCC/analog-tape detections; centered cassette well. Gold-plated RCA connectors. Analog cassette playback with Dolby B and C NR; user-DC subdecoding; 12-character album title, artist name, and track title display of prerecorded DCCs; remote control; level meters with peak hold; remote control; peak hold; fluorescent display; remote control compatibility with Technics receivers. FR 30-16,000 Hz ±3 dB high bias; S/N (high bias) 56 dbA no NR; 56 dB Dolby B, 74 dB Dolby C; W&F 0.01%; 17% x 5% x 11 in; 10 lb $2,500
HOME RECORDING EQUIPMENT

**VECTOR RESEARCH**

VCX-270 Cassette Deck
Dolby B, C, HX Pro. Features 2-motor design, switchable MXF filter. Headphone jack with volume control. Full-logic controls; high-frequency trim and bias controls. FR 30-17,000 Hz; S/N 75 dB Dolby C, 67 dB Dolby B; W&F 0.05% wrms. 17 1/2 x 5 1/2 x 11 1/2 in; 13 lb...$299

VCX-255 Cassette Deck
Dolby B, C. Record-balance control, metal-bias compatibility, adjustable bias. FR 30-17,000 Hz ± 3 dB high bias; S/N 67 dB Dolby B, 75 dB Dolby C; W&F 0.05% wrms. 17 x 4 1/2 x 11 1/2 in; 12 lb...$180

YAMAHA

KX-W752 Double Cassette Deck
Dolby B, C, HX Pro for both transports. Features 12-layer amorphous record/play heads; sorbothane-stabilized cassette doors. Headphone jack with volume control. 2-cassette sequential play/record and simultaneous record of independent sources: autoreverse record/play for both transports; auto tape-bias selector; play trim; high-speed dubbing; cross-Dolby, random program, and skip dubbing; 15-selection random program play for each transport; intro scan; auto record mute; blank skip; separate controls, meters, and displays for each transport; level meters with peak hold. 17 1/2 x 5 1/2 x 14 1/4 in; 18 lb...$792

KX-670 3-Head Cassette Deck
Dolby B, C, HX Pro. Features 3 motors; closed-loop dual-capstan design; sorbothane cassette stabilizer; antiresonance feet; hard Permalloy record and play heads. Headphone jack with volume control. Auto adjustment of record bias, sens, and EQ; play trim; adjustable bias; L/R peak-level meters with peak hold: optimum-record-level indicator; 4-digit linear time counter with remaining-time display; repeat: bidirectional intro scan; timer capability; program search; auto record mute; auto tape-bias selector; record level and balance controls. 17 1/2 x 5 1/2 x 11 1/2 in; 11 lb...$499

KX-W362 Double Cassette Deck
Dolby B, C, HX Pro. Features 12-layer amorphous head: 2 motors; sorbothane cassette stabilizer. Full-logic controls; autoreverse: one transport record/play, other play-only: program search; repeat play: 2-cassette sequential play: play trim, auto tape-bias selector; record level and balance controls; record-level indicator: high-speed dubbing: auto record mute; peak-level meters. FR 20-20,000 Hz ± 3 dB metal; 17 1/2 x 5 1/2 x 11 1/2 in; 11 1/2 lb...$429

KX-580 Cassette Deck
Dolby B, S, C, HX Pro. Features separate mechanical and signal power supplies; hard Permalloy heads; 2-motor transport; cassette stabilizer; switchable MXF filter. Auto tape tuning; play trim; bidirectional scan; repeat: adjustable bias; program search; auto tape-bias selector; synchro record with compatible CD players: timer record/play, 15-segment fluorescent level meters with peak hold; 4-digit fluorescent display. Yamaha IS-system remote-control compatibility. Remote control optional. FR 20-20,000 Hz ± 3 dB metal; S/N 68 dB Dolby B, 76 dB Dolby C, 80 dB Dolby S; W&F 0.05% wrms. 17 1/2 x 5 1/4 x 11 1/2 in; 10 lb...$299

KX-R740 Cassette Deck
Dolby B, C, HX Pro. Double-gap ferrite erase head: DC-servo capstan; DC reel motors; 12-layer amorphous record/play head; sorbothane cassette stabilizer; switchable MXF filter; antiresonance feet. Infrared input jacks, headphone jack with volume control. Microcomputer-controlled full-logic operation: autoreverse; bidirectional intro scan; blank skip; adjustable bias; play trim; optimum record-level indicator: program search; repeat: record mute: auto tape-bias selector: timer: L/R LCD peak-level meters with peak hold; 4-digit LCD counter. FR 20-20,000 Hz metal; 17 1/2 x 5 1/4 x 11 1/2 in...$379

KX-W262 Double Cassette Deck
Dolby B, C. Features 2-motor transports. Headphone jack. Full-logic controls; one transport autoreverse record/play; one autoreverse play only; high-speed dubbing; record level and balance controls; auto record mute; repeat: 2-cassette sequential play; auto bias selector; peak-level meters. FR 20-20,000 Hz ± 3 dB metal; W&F 0.08%. 17 1/2 x 5 1/4 x 10 1/2 in; 11 lb...$299

KX-380 Cassette Deck
Dolby B, C, HX Pro. Features 2 hard-Permalloy heads; switchable MXF filter. Headphone jack with volume control. Auto tape tuning: intro scan; adjustable bias: program search; play trim; auto tape-bias selector; synchro record with compatible CD players: 15-segment peak-level meter; 4-digit fluorescent display. Yamaha IS-system remote-control compatibility. Remote control optional. FR 20-19,000 Hz ± 3 dB metal; S/N 66 dB Dolby B, 74 dB Dolby C; W&F 0.08% wrms. 17 1/2 x 5 1/4 x 11 1/2 in; 10 lb...$249

Yamaha KX-670

BLANK MEDIA

**BASF**

DCC Maxima Digital Compact Cassettes
Co-developed with Philips.
D-90, 90 min.............................................$12.99
D-75, 75 min.............................................$10.99

Chrome Maxima II High-Bias Cassettes
Double-coated chromium dioxide.
C100, 100 min.............................................$3.99
C90, 90 min.............................................$3.49
C60, 60 min.............................................$3.25

Chrome Super II High-Bias Cassettes
Double-coated chrome formulation.
C100, 100 min.............................................$3.33
C90, 90 min.............................................$2.99

Chrome Extra II High-Bias Cassettes
C100, 100 min.............................................$2.79
C90, 90 min.............................................$2.29
C60, 60 min.............................................$1.89

Ferro Extra I Normal-Bias Cassettes
C100, 100 min.............................................$1.89
C90, 90 min.............................................$1.59
C60, 60 min.............................................$1.45

**DENON**

MG-X100 Metal Cassette
High-temperature-resistant shell. 100 min...$8.99

Digital Audio Tapes
K-90D9S, 90 minutes, Data storage...$18.99
K-60D9S, 60 minutes, Data storage...$14.99
R-120DT, 120 min.............................................$12.99
R-90D9T, 90 min.............................................$10.99
R-60D9T, 60 min.............................................$8.99
R-20DM, 20 min. Demo Master...$7.99

HDM Metal Cassettes
HDM-100, 100 min.............................................$5.99
HDM-90, 90 min.............................................$5.50
HDM-74, 74 min.............................................$4.99

HDX High-Bias Cassettes
Features formulation combining pure-metal particles and cobalt-doped ferric oxide.
HDX-108, 108 min.............................................$4.99
HDX-90, 90 min.............................................$4.75
HDX-74, 74 min.............................................$4.25

HD8-60, 60 min.............................................$3.75
HD7 High-Bias Cassettes
HD7-100, 100 min.............................................$4.25
HD7-90, 90 min.............................................$4
HD7-74, 74 min.............................................$3.50

HD6 High-Bias Cassettes
HD6-100, 100 min.............................................$3.50
HD6-90, 90 min.............................................$3.25
HD6-74, 74 min.............................................$2.75

S-Port Cassettes
Features thin case with rounded edges.
S-Port Metal.............................................$3.49
S-Port High.............................................$2.49

DXI Normal-Bias Cassettes
DXI-90, 90 min.............................................$2.25
DXI-60, 60 min.............................................$1.75

**DIC DIGITAL**

Write-Once Recordable CD's
CDR-74.............................................$32
CDR-63.............................................$30
<table>
<thead>
<tr>
<th>BLANK MEDIA</th>
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<tr>
<td>MQ Master Quality Digital Audio Tapes</td>
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<tr>
<td>D-122-MQ</td>
</tr>
<tr>
<td>D-92-MQ</td>
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<tr>
<td>D-62-MQ</td>
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<tr>
<td>D-48-MQ</td>
</tr>
<tr>
<td>D-30-MQ</td>
</tr>
<tr>
<td>D-15-MQ</td>
</tr>
<tr>
<td>HQ High Quality Digital Audio Tapes</td>
</tr>
<tr>
<td>D-120-HQ</td>
</tr>
<tr>
<td>D-90-HQ</td>
</tr>
<tr>
<td>D-60-HQ</td>
</tr>
<tr>
<td>D-30-HQ</td>
</tr>
<tr>
<td>D-10-HQ</td>
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</table>

**FUJI**

Analog cassettes feature a thin shell.

**Digital Audio Tapes**

<table>
<thead>
<tr>
<th>120 min.</th>
<th>90 min.</th>
<th>60 min.</th>
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<tbody>
<tr>
<td>$12.95</td>
<td>$11.95</td>
<td>$10.95</td>
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**Digital Compact Cassettes**

<table>
<thead>
<tr>
<th>90 min.</th>
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<tr>
<td>$9.99</td>
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**FR Series Metal Cassettes**

<table>
<thead>
<tr>
<th>100 min.</th>
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<tr>
<td>$6.49</td>
<td>$5.99</td>
<td>$5.49</td>
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**ZI High-Bias Cassettes**

<table>
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<th>100 min.</th>
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</tr>
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<tbody>
<tr>
<td>$5.49</td>
<td>$4.99</td>
<td>$4.49</td>
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</tbody>
</table>

**FR-Hx PRO Series High-Bias Cassettes**

Double-coated tape in heat-resistant shell.

<table>
<thead>
<tr>
<th>100 min.</th>
<th>90 min.</th>
<th>60 min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5.49</td>
<td>$4.99</td>
<td>$4.49</td>
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</table>

**DR-II Series High-Bias Cassettes**

Double-coated tape.

<table>
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<th>100 min.</th>
<th>90 min.</th>
<th>60 min.</th>
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<tbody>
<tr>
<td>$3.49</td>
<td>$3.99</td>
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</table>

**DR-I Series Normal-Bias Cassettes**

<table>
<thead>
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<th>90 min.</th>
<th>60 min.</th>
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<tr>
<td>$1.99</td>
<td>$1.49</td>
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**JVC**

**R-VX Digital Audio Tapes**

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<th>120 min.</th>
<th>100 min.</th>
<th>90 min.</th>
<th>60 min.</th>
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<tr>
<td>$14</td>
<td>$12.70</td>
<td>$12</td>
<td>$10</td>
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**XFI-V Metal Cassettes**

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<th>90 min.</th>
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<tr>
<td>$3.89</td>
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</table>

**AF/II High-Bias Cassettes**

<table>
<thead>
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<th>90 min.</th>
<th>60 min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2.49</td>
<td>$2.19</td>
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</tbody>
</table>

**LORAN**

**ESQ-90 High-Bias Cassette**

Features polycarbonate shell. 90 min. $4.99

**Pro Digital Audio Tapes**

Made to custom lengths.

| Pro-DAT 140, 140 min. | $13.80 |
| Pro-DAT 120, 120 min. | $11.50 |
| Pro-DAT 90, 90 min.    | $10.25 |
| Pro-DAT 75, 75 min.    | $9.50 |
| Pro-DAT 60, 60 min.    | $8.75 |
| Pro-DAT 45, 45 min.    | $7.25 |
| Pro-DAT 30, 30 min.    | $6.50 |
| Pro-DAT 20, 20 min.    | $6.00 |

**MAXELL**

**Digital Audio Tapes**

- R-120DM, 120 min. $14.99
- R-90DM, 90 min. $12.99
- R-60DM, 60 min. $10.99
- R-46DM, 46 min. $8.99

**Metal Vertex Metal Cassettes**

- MX-90, 90 min. $14.99
- MX-S Metal Cassettes
  - MX-S 100, 100 min. $5.99
  - MX-S 90, 90 min. $5.29
  - MX-S 60, 60 min. $4.39
- UD Cassettes
  - UDIH 90, 90 min. 2 pk $5.99
  - UDIH 60, 60 min. 2 pk $4.99
- XLII-S Epitaxial Cassettes
  - XLII-S-100, 100 min. $4.99
  - XLII-S-90, 90 min. $4.39
  - XLII-S-60, 60 min. $3.59
- MX Metal Cassettes
  - MX-110, 100 min. $4.49
  - MX-90, 90 min. $3.99
  - MX-60, 60 min. $2.99
- XLII Epitaxial Cassettes
  - XLII-100, 100 min. $4.39
  - XLII-90, 90 min. $3.79
  - XLII-60, 60 min. $3.29
  - XLII-45, 45 min. $2.99
- XLI Cassettes
  - XLI-100, 100 min. $3.29
  - XLI-90, 90 min. $2.99
  - XLI-60, 60 min. $1.89
  - XLI-46, 46 min. $1.89
- UR Cassettes
  - UR-120, 120 min. $2.79
  - UR-90, 90 min. $1.79
  - UR-60, 60 min. $1.49
  - UR-45, 45 min. $1.49

**MEMOREX**

**Digital Compact Cassettes**

- DRX-90, 90 min. $9.99
- DRX-60, 60 min. $7.99

**CDX IV Metal Cassettes**

<table>
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<th>110 min.</th>
<th>90 min.</th>
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<tbody>
<tr>
<td>$7.99</td>
<td>$6.99</td>
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**HBS High-Bias Cassettes**

<table>
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<th>110 min.</th>
<th>90 min.</th>
<th>60 min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5.29</td>
<td>$4.39</td>
<td>$3.99</td>
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**dBS Normal-Bias Cassettes**

<table>
<thead>
<tr>
<th>120 min.</th>
<th>110 min.</th>
<th>90 min.</th>
<th>60 min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.99</td>
<td>$1.79</td>
<td>$1.59</td>
<td>$1.29</td>
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</table>

**MRX I Normal-Bias Cassettes**

Features clear shell; lifetime warranty.

<table>
<thead>
<tr>
<th>90 min.</th>
<th>60 min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.89</td>
<td>$1.59</td>
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</tbody>
</table>

**RADIO SHACK**

**Digital Compact Cassette**

- SD-90, 90 min. $9.99

The following analog cassettes feature head-cleaning leader tapes.

**Supertape High-Bias Cassettes**

- HD-90, 90 min. 5 pk. $12.99
- HD-90, 90 min. 3 pk. $7.99
- HD-60, 60 min. 3 pk. $6.99
- MII-100, 100 min. $4.99
- MII-90, 90 min. $4.79
- MII-76, 76 min. $4.49
- MII-60, 60 min. $3.99
- HD-100, 100 min. $3.69
- HD-76, 76 min. $2.79

**Supertape Metal-Bias Cassettes**

- MX-90, 90 min. $5.99
- MV-60, 60 min. $4.99

**Supertape Normal-Bias Cassettes**

- XR-90, 90 min. 3 pk. $5.29
- XR-60, 60 min. 3 pk. $3.99
- LN-120, 120 min. 2 pk. $3.19
- XR-120, 120 min. $2.79

**SCOTTCH**

**Digital Audio Tapes**

| DAT-120, 120 min. | $12.99 |
| DAT-90, 90 min.    | $11.99 |
| DAT-60, 60 min.    | $9.99  |
| DAT-46, 46 min.    | $6.99  |

**Digital Compact Cassettes**

- DCC, 90 min. $10.99
- DCC, 75 min. $10.49
- DCC, 60 min. $9.99

**High-Bias Cassettes**

- XS-HS-100, 100 min. $4.49
- XS-HS-90, 90 min. $3.99
- XS-HS-60, 60 min. $2.99

**Normal-Bias Cassettes**

- CX-90, 90 min. $2.99
- CX-60, 60 min. $2.49
- BX-90, 90 min. $1.99
- BX-60, 60 min. $1.69

**SONY**

**Super Metal Master Metal Cassettes**

Features ceramic-composite tape guides and cassette shell.

90 min. $19.99

**Digital Audio Tapes**

Features 0.2-micron particles.

<table>
<thead>
<tr>
<th>120 min.</th>
<th>90 min.</th>
<th>60 min.</th>
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<tbody>
<tr>
<td>$18</td>
<td>$15.99</td>
<td>$12.49</td>
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**MiniDiscs**

<table>
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<tr>
<th>74 min.</th>
<th>60 min.</th>
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<tbody>
<tr>
<td>$16.99</td>
<td>$13.99</td>
</tr>
</tbody>
</table>

**UX Turbo High-Bias Cassettes**

The following cassettes are designed to resist temperatures up to 250°F and feature a full-width window and raised-marker side ID's.
### BLANK MEDIA

<table>
<thead>
<tr>
<th>Features</th>
<th>Price (60 min)</th>
<th>Price (90 min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiresonant tape guides</td>
<td>$3.99</td>
<td>$4.49</td>
</tr>
<tr>
<td>High-polymer binder system; rounded corners</td>
<td>$3.29</td>
<td>$3.99</td>
</tr>
<tr>
<td>Transparent lower shell; slim case</td>
<td>$1.59</td>
<td>$1.69</td>
</tr>
<tr>
<td>Full-width window; rounded case corners</td>
<td>$2.49</td>
<td>$3.19</td>
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<tr>
<td>Transparent shell</td>
<td>$2.49</td>
<td>$3.19</td>
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<tr>
<td>Features</td>
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<tr>
<td>Digital Audio Tapes</td>
<td>$4.39</td>
<td>$4.49</td>
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<tr>
<td>SD High-Bias Cassettes</td>
<td>$3.69</td>
<td>$3.99</td>
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### DIRECTORY OF MANUFACTURERS

<table>
<thead>
<tr>
<th>Company</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aiwa</td>
<td>800 Corporate Dr., Mahwah, NJ 07430</td>
<td>(800) 289-2492</td>
</tr>
<tr>
<td>Arcam</td>
<td>P. O. Box 381, Highland Lakes, NJ 07422</td>
<td>(201) 764-8958</td>
</tr>
<tr>
<td>Bang &amp; Olufsen</td>
<td>1150 Feehanville Dr., Mount Prospect, IL 60056</td>
<td>(800) 323-0378</td>
</tr>
<tr>
<td>BASF</td>
<td>Crosby Dr., Bedford, MA 01730-1471</td>
<td>(617) 271-4000</td>
</tr>
<tr>
<td>Carver</td>
<td>P. O. Box 1237, Lynnwood, WA 98046</td>
<td>(206) 670-3429</td>
</tr>
<tr>
<td>Demon</td>
<td>222 New Road, Parsippany, NJ 07054</td>
<td>(201) 575-7810</td>
</tr>
<tr>
<td>DHC Digital</td>
<td>300 Frank W. Burr Blvd., Teaneck, NJ 07666</td>
<td>(800) 329-3142</td>
</tr>
<tr>
<td>Dual</td>
<td>19 W. 44th St., New York, NY 10036</td>
<td>(212) 840-1976</td>
</tr>
<tr>
<td>Fisher</td>
<td>21350 Lassen St., Chatsworth, CA 91311-2329</td>
<td>(818) 988-2322</td>
</tr>
<tr>
<td>Fujii</td>
<td>555 Taxter Rd., Elnsford, NY 10523</td>
<td>(914) 789-8100</td>
</tr>
<tr>
<td>Harman Kardon</td>
<td>8380 Balboa Blvd., Northridge, CA 91325</td>
<td>(818) 893-9992</td>
</tr>
<tr>
<td>JVC</td>
<td>41 Slater Dr., Elmhurst Park, NJ 07407</td>
<td>(201) 794-3900</td>
</tr>
<tr>
<td>Kenwood</td>
<td>P. O. Box 22745, Long Beach, CA 90801</td>
<td>(800) 536-9663</td>
</tr>
<tr>
<td>Lorant</td>
<td>2715 Pennsylvania Ave., W. Warren, PA 16365</td>
<td>(600) 633-0455</td>
</tr>
<tr>
<td>Memorex</td>
<td>P. O. Box 901021, Fort Worth, TX 76101</td>
<td>(817) 878-6700</td>
</tr>
<tr>
<td>Marantz</td>
<td>1150 Feehanville Dr., Mount Prospect, IL 60056</td>
<td>(708) 299-4000</td>
</tr>
<tr>
<td>Maxell</td>
<td>22-08 Route 208 S., Fair Lawn, NJ 07410</td>
<td>(201) 794-5900</td>
</tr>
<tr>
<td>NAD</td>
<td>633 Granite Ct., Pickering, Ontario L1W 3K1</td>
<td>(905) 831-6333</td>
</tr>
<tr>
<td>Nakamichi</td>
<td>955 Francisco St., Torrance, CA 90502</td>
<td>(310) 338-8150</td>
</tr>
<tr>
<td>Onkyo</td>
<td>200 Williams Dr., Ramsey, NJ 07446</td>
<td>(201) 625-7950</td>
</tr>
<tr>
<td>Optimus</td>
<td>(see Radio Shack)</td>
<td></td>
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<tr>
<td>Philips</td>
<td>1 Philips Dr., P. O. Box 14810, Knoxville, TN 37914-1810</td>
<td>(615) 521-4316</td>
</tr>
<tr>
<td>Pioneer</td>
<td>1925 E. Dominguez St., Long Beach, CA 90810</td>
<td>(800) 421-1404</td>
</tr>
<tr>
<td>Radio Shack</td>
<td>700 One Tandy Center, Fort Worth, TX 76102</td>
<td>(817) 390-3011</td>
</tr>
<tr>
<td>Rotel</td>
<td>P. O. Box 8, North Reading, MA 01864</td>
<td>(508) 664-3820</td>
</tr>
<tr>
<td>Sansui</td>
<td>1290 Wall St., W. Lindhurst, NJ 07071</td>
<td>(201) 460-9710</td>
</tr>
<tr>
<td>Scotch</td>
<td>3M Black Watch</td>
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<tr>
<td>Sony</td>
<td>120 Harbor Park Dr., Port Washington, NY 11050</td>
<td>(516) 625-0100</td>
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<tr>
<td>TDK</td>
<td>12 Harbor Park Dr., Port Washington, NY 11050</td>
<td>(516) 625-0100</td>
</tr>
<tr>
<td>Technics</td>
<td>One Panasonic Way, Secaucus, NJ 07094</td>
<td>(201) 348-9900</td>
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</table>

This directory includes only those manufacturers represented in the preceding Buying Guide. For more extensive product listings and a complete directory of audio and A/V manufacturers, see Stereo Buyers' Guide 1994 ($4.95 at newsstands; $4.95 plus $1.75 postage and handling from Stereo Review Fulfillment Center, P. O. Box 7085, Brick, NJ 08723; telephone 908-367-2990 for credit-card orders).
Together Again—For The First Time
Me, Torne and Buddy Rich

Todd Rundgren
Something/Anything?

NEW RELEASE UDCD 2591
This 1972 classic included the hits Couldn’t
You Just Tell Me, I Saw The Light and Hello,
It’s Me. This 2-CD set is housed in a deluxe
package with an expanded booklet, restoring
the long out-of-print original lyric insert.

NEW RELEASE UDCD 2593

MUDDY WATERS
folk singer

Pink Floyd
Atom Heart Mother

THE MODERN JAZZ QUARTET
BLUES AT CARNEGIE HALL

NATURE’S ENCORE
For 17 years, Mobile Fidelity Sound Lab has been dedicated to making music
sound its absolute best. Remaining at the cutting edge of audio technology, we
have taken our proprietary mastering technique—one step further with the
revolutionary new GAIN System™. We always work from original master tapes—
with an unwavering attention to detail—because we love the music as much as
you do. Hear the difference on the ULTRADISC II. The original limited edition,
24-karat gold audiophile compact disc.

For a free color catalog, call 800-423-5759
e-mail: mofi@mofi.com

Available at:
DISC JOCKEY
music stores
Kate Bush Stretches Out

Few artists have so successfully bent musical trends and technology toward them as has Kate Bush. A pioneer in the use of the Fairlight synthesizer, she artfully explored the potential of sampling as far back as 1982's "The Dreaming." Perhaps buoyed by the Utah Saints' prominent sample of a line from an old song of hers (Cloudbursting) in their recent U.K. rave hit "Something Good," in her new album, "The Red Shoes," she breathlessly dives into dance-club beats, Celtic instrumentation, bluesy guitar-vocal dialogues, grunge guitar, Bulgarian chorales, sunny world-music tangents, art song, Princean funk, and incantatory trance music.

The album immediately goes for maximum liftoff with "Rubberband Girl," which captures Bush at her most rhythmically blunt and artfully infectious. Over a solid, rave-worthy drum beat underpinned by synthesizer swashes and marimba, she playfully elongates her vocals in a wish for emotional resilience ("If I could twang like a rubberband / I'd be a rubberband girl"). Vocally, she's got more stretch in her than a slingshot, reaching for the top of her range with no loss of power on such numbers as the delirious title track and Top of the City, a plea to climb above and beyond the filth of city streets.

A handful of special guests contribute to several tracks. Eric Clapton plays with exquisite feeling in "And So Is Love," and the Trio Bulgarka and Prince join Bush for an ecstatic outpouring in "Why Should I Love You?" Bush herself rises to a crescendo of pure, uncensored feeling when she blurts out, "Just being alive / It can really hurt" in "Moments of Pleasure" and "I don't know if you love me or not" in Top of the City. In Lily she assumes the voice of an elderly sage, snapping, "Child, take what I say with a pinch of salt / And protect yourself with fire."

Musically inventive, emotionally audacious, and entrancing in an all-too-rare way, "The Red Shoes" will set your feet dancing and your head spinning.

Parke Puterbaugh

KATE BUSH
The Red Shoes
Rubberband Girl: And So Is Love: Eat the Music:
Moments of Pleasure: The Song of Solomon:
Lily: The Red Shoes: Top of the City:
Constellation of the Heart: Big Stripey Lie:
Why Should I Love You?: You're the One
COLUMBIA 53737 (55 min)

Stern and Bronfman: Equal Partners in Brahms

Back in 1962, Henryk Szeryng and Arthur Rubinstein's recording of the Brahms Violin Sonatas on a pair of RCA LP's pretty much set the standard for all future recorded versions. Now violinist Isaac Stern and pianist Yefim Bronfman have matched their predecessors point for point musically, and their Sony CD has the benefit of superb sonics. The live
Kevin Montgomery's American Music

If ever there was a young singer-songwriter with star potential, it is Kevin Montgomery. Nashville born, but New York and California cured, this twenty-five-year-old writes and sings what he calls "American Music." And while that term might sound like a cop-out, in this case it's true. His songs—extremely well-crafted, thoughtful, and heartfelt—resonate with decades of great American songwriters, from Buddy Holly (in whose band Kevin's father, country producer Bob Montgomery, once played) to Bob Dylan and beyond.

On "Fear Nothing," Montgomery's debut album, the amalgam of sound isn't really country, although Nashville would certainly like to claim it—for the moment, and for the dance of life—but he never follows through for fear they would mock such an unguarded display of emotion. Paranoia figures prominently in these songs, from the Chris Isaak-like "I Want You," with its atmospheric guitar work, to "I Won't Close My Eyes," where a pop melody and a strong chorus can't obscure the singer's darkening doubt about a lover on the lam. That fixation continues on "Don't Make Me Hate the Things I Love," where Montgomery makes the mention of a special dress and the small of his lover's back an erotic, poetic passage, and a testament to a writing ability beyond his years.

Montgomery occasionally steps out of strictly autobiographical mode, detailing the convoluted lives of two women in "Everybody's Girl" and "Josie's Getting Stronger," one who has no love to give anyone, and another who gives it to the wrong man. Missed opportunities, we

BRAHMS:
Sonatas for Piano and Violin;
Scherzo in C Minor
Stern; Bronfman
SONY 53107 (72 min)

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soon discover, are this young songwriter's stock-in-trade. Yet in his ability to make the personal the universal, his loss becomes our own. "Fear Nothing" seems to be saying we're all in this together—together, but alone. Montgomery knows that the person we always fool best is the one we look at in the mirror every day.

Alanna Nash

KEVIN MONTGOMERY
Fear Nothing
Red-Blooded American Boy; Everybody's Girl;
Code of Honor; I Won't Close My Eyes;
Which Way Is It Gonna Be; I Want You; Fear
Nothing; Josie's Getting Stronger; Softer Years;
Don't Make Me Hate the Things I Love
A&M 31454 0141 (50 min)

Inbal Revisits Shostakovich

While most of Shostakovich's fifteen symphonies have entered the concert repertory by now, his Second and Third have found few enthusiasts—understandable, perhaps, since these single-movement works culminate in choral glorifications of, respectively, the October Revolution and May Day. But Eliahu Inbal's stunning new Denon recording of the Third with the Vienna Symphony Orchestra definitely calls for a reappraisal of this work. And the performance, like the one of the Ninth Symphony on the same disc, may also create higher expectations for the remainder of Inbal's Shostakovich cycle than did the previous installments.

Shostakovich composed his Third Symphony in a single month at the end of 1929, just after he reached the age of twenty-three. He had no commission, but was apparently motivated by a wish for official approval. Whatever the truth of that, he created, as Inbal suggests more powerfully than any conductor who has recorded this work before (yes, including Kondrashin and Rozhdestvensky), music whose substance and conviction are beyond the designs of any public "program" that may have been devised for it. Like the Fourth Symphony, which Shostakovich himself suppressed for a quarter-century, the more concise Third (a little longer than a half-hour in this performance) points ahead clearly to the intensely and urgently personal music of his later years in which he made himself a chronicler of his times. Fortunately, most Americans do not understand Russian (and the poor English translation of Semyon Kirsanov's text in the notes does not encourage attention to the words), so we can listen to the chorus at the end unfettered by thoughts of May Day, hearing it as an expansion of the orchestral coloring rather than as conveying any specific message.

In recent years we've been told what a dark and menacing work the Ninth Symphony is. Russian musicians who were actually close to the composer, however,
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THE BEAVIS AND BUTT-HEAD EXPERIENCE
GEFFEN 24613 (60 min)
Performance: Cool when it doesn't suck
Recording: Sucks when it isn't cool
Are you experienced? Have you ever been experienced? Well, I have, and that's why I know that there's more than one way to rate this audio translation of MTV's most dynamic duo since Dr. Dre and Ed Lover. So, in the interest of, like, total consumer service, here are the ways in which various people will experience "Experience."

Butthead: Sucks.
Beavis: Cool.
High-school student: Sucks! No, cool!
No, sucks! No, cool!... College student: The steady, rocking peulance of Nirvana and the staccato, metalloid psychological confusion of Megadeth are a perfect match for the desperate identity crises of the two young protagonists, who do not—repeat, do not—resemble me at the same dorky age.

Classic-rocker: Why are those dudes in Aerosmith hanging with all those loser bands?
Cher: Oh, Beavis, you are the studliest young boy I've ever known. Your braces are truly heavy metal.
Me: Forget the CD. Beavis and Butthead is about to start on MTV. Huh-huh. Huh-huh-huh. R.G.

THE BIS-QUITS
OH BOY 012 (48 min)
Performance: Solid
Recording: Homegrown
Somehwhere between the Replacements and Tom Petty's Heartbreakers lies the perfect rock band, and in time it might just be the Bis-Quits. These prematurely jaded veterans from various signed and unsigned bands almost packed it in but decided to gig and giggle together instead of growing alone, and hence the Bis-Quits (as in almost quit the biz, and pronounced "biscuits") were born. The first rock-band signees to John Prine's Oh Boy label, the Bis-Quits play the music they feel like playing, biz be damned, on their debut album, which is reoosy in its uncluttered guitars-and-drums directness, careful not to be pristine, a tad smitten with its own cleverness but likable nonetheless. They get good guitar sounds—as in the cranked-up instrumental 76 Bisquits, with its underwater effects and goofy momentum—and they click with some especially sharp songs here and there, like the musically inventive Cibberpop and the lyrically right-on Eighties kissoff Powers That Be. Overall, the Bis-Quits are somewhat unfocused, straddling both alternative and mainstream camps but belonging to neither. There's no question they're onto something, though.

GRUNGE MEETS MERSEYBEAT
At first, the idea of alternative-rock types playing Beatles songs would seem about as likely as Louis Farrakhan singing Ebony and Ivory at a skinheads convention. And yet on the soundtrack to a new film entitled Backbeat (Virgin 39386) that's exactly what's going on. Producer Don Was apparently intuited that this true story of the Fab Four's pre-stardom days (and the love triangle between John Lennon, original Beatles bassist Stu Sutcliffe, and German artist Astrid Kircher) would be bogus, with actors simply lip-synching pristine Beatlemania-style musical recreations. His solution? Enlisting members of Nirvana, Gumball, R.E.M., Sonic Youth, the Afghan Whigs, and Soul Asylum to impersonate the early Beatles at their scruffiest. The result is one of the great garage albums, as close to a 1963 Beatles bootleg in stereo as humanly possible. Special kudos to Sonic Youth's Thurston Moore, who plausibly re-creates George Harrison as a proto-noise rocker.

MICHAEL BOLTON
The One Thing
COLUMBIA 35567 (52 min)
Performance: Strong but sensitive
Recording: Sensitive but strong
Rock critics everywhere love to pick on Michael Bolton because of his excesses, and Lord knows he's got a few. As a former hard-rocker, he knows exactly how to punch his musical buttons with superhuman force—and he almost never fails to do so. "The One Thing" proves that he hasn't lost his touch. So, if you hate Bolton's musical tics, or his overuse of them, you're going to hate his newest album. (Hey—corporate rock is nothing if not consistent.) But if you don't reflexively reach every time you hear the Bolton Screech, then "The One Thing" will probably tantalize you with some of its zirconium gems. With I'm Not Made of Steel, Bolton takes time out from his meditations on love—both romantic and paternal—to show his vulnerability: "I can bend I can break I can feel / I'm not made of steel." There are musical epiphanies as well. Bolton isn't afraid to stop his parade of catchy-as-catchy-can soft-rock to let his hair down. The Meat Loafian grandiosity of Ain't Got Nothing If You Ain't Got Love allows him to rock out—note the sound of a cowbell (synthesized?), an obvious homage to Mountain's Mississippi Queen.

The album reaches its apotheosis, however, with Completely. This torch ballad composed by Diane Warren, the most suc-
cessful nonsinger/songwriter of the past decade, urges us to believe in the totality of the love under consideration. But the song’s chorus, sung with Bolton’s finest Ray-Charles-in-heated intensity, could be describing his musical philosophy as well: “Completely not in between / But everything / Completely.” This is how Bolton sings, as if sincerity and feeling can redeem the clichés he’s singing, reaching the truth buried deep within them.

No wonder critics—professional cynics—don’t like Bolton. He’s a musical true believer, without doubts even when he sings about doubt. You needn’t, and shouldn’t, think about his music. You should listen with your heart, not your mind. Go on. Bend. Break. Feel. Michael Bolton isn’t made of steel, and neither are you.

R.G.

BUZZCOCKS

Trade Test Transmissions
CAROLINE 1747 (55 min)
Performance: Non-nervous
Recording: Okay

The high-energy Buzzcocks are back, making an exuberantly stressed-out racket on “Trade Test Transmissions.” Lines like “Will I be the last to know?” (Last to Know), “I’m living in a world of isolation” (Isolation), and “Straight, straight through my heart the arrow flies” (Smile) describe a solipsistic paranoid made miserable by love’s slings and arrows. Yet the music is witty, muscular, and aggressive, suggesting a buoyant spirit. In the end, the music steamrollers over all that’s in its path, reducing everything to rubble—even heartbreak.

The Buzzcocks’ melodious minimalist monotony is sustained over the course of the album’s seventeen cuts—in Pete Shelley’s Bowie-esque whine, the guitars’ full-bore attack, the aggressive rhythm section. Mixing a pure-pop approach with the jagged discontent of punk, the Buzzcocks hark back not only to their own roots in British punk circa 1977 but also the furiously witty pop-punk energy of the early Who. It is no accident that Shelley sings, “Even though you’re not my mum / I’ve got to get my washing done”—a lyrical allusion to the Who’s definitive early single, Substitute. Carrying on with delicious, no-frills abandon on Trade Test Transmissions and sparking like a generator on fire when Love Turns Around and Alive Tonight, this suc-

WHY, YOU’RE NOTHING BUT A PACK OF CARDS!!!

Q u estion: What do Smiley Lewis, Lucky Joe Hunter, Big Mama Thornton, King Curtis, and Professor Longhair have in common? Answer: They all recorded seminal Fifties R&B hits, they’re all dead, and (along with other artists still with us) they’re all associated with other singers, like Cry Me a River, which was Julie London’s exclusive property during the Fifties. Wisely, Cole tries to find her own interpretation, favoring a cool detachment that some might find too emotionally limited. She is much more exciting—and convincing—when she leaves the ballads and turns to material that gives her a chance to show off her jazz chops, like Too Close for Comfort and Let There Be Love, where she interpolates snatches of Benny Golson’s Killer Joe. Other unexpected delights include It’s Sand Man, which was an aerobic exercise for Lambert, Hendricks, and Ross, and Calypso Blues, which Cole’s father often sang in concert. All in all, Natalie Cole may be destined to remain a derivative singer rather than a truly original one, but “Take a Look” is appealing nonetheless.

P.G.

NATALIE COLE

Take a Look
ELEKTRA 61496 (65 min)
Performance: Jazz-based
Recording: Clean

The unmistakably jazzy nature of Natalie Cole’s latest album should come as no surprise. Growing up in dad Nat King Cole’s home, where friends like Ella Fitzgerald and Mel Tormé frequently dropped by, she first planned on becoming a jazz singer, only later turning to the popular soul music that marked her debut. The extraordinary success of her 1992 “Unforgettable” album, which featured material identified with her father, opened the door for further jazz exploration. This new set is a logical extension of that experiment.

On “Take a Look” Cole has drawn from songs that range back to Billie Holiday’s Don’t Explain and the Forties movie classic As Time Goes By. Other songs are closely associated with other singers, like Cry Me a River, which was Julie London’s exclusive property during the Fifties. Wisely, Cole tries to find her own interpretation, favoring a cool detachment that some might find too emotionally limited. She is much more exciting—and convincing—when she leaves the ballads and turns to material that gives her a chance to show off her jazz chops, like Too Close for Comfort and Let There Be Love, where she interpolates snatches of Benny Golson’s Killer Joe. Other unexpected delights include It’s Sand Man, which was an aerobic exercise for Lambert, Hendricks, and Ross, and Calypso Blues, which Cole’s father often sang in concert. All in all, Natalie Cole may be destined to remain a derivative singer rather than a truly original one, but “Take a Look” is appealing nonetheless.

P.G.

GUNS ’N ROSES

The Spaghetti Incident?
GEFFEN 24617 (45 min)
Performance: Punk and disorderly
Recording: Good

Give Guns ’n Roses this much: for a mainstream band, they never take the easy, expected path. Running through a brisk patch of punk-rock covers, as they do here, is not the act of a group trying desperately to hang onto its market share. And covering a tune by Charles Manson at the
end of such an album is outright lunacy—punk with its middle finger raised somewhat menacingly. That said, there’s more arena rock than punkish rejection of same in the Gunners’ new album, despite their sometimes degenerate and trouble-making ways. It’s hard, if not impossible, to put across the underclass rage of punk when you’re sitting on top of a pile of money, more than a decade removed from the original movement. Also, Matt Sorum drums like a pro, not a punk, and even Axl Rose has some problems with the material. Delivering the U.K. Subs’ Down on the Farm in a fake British accent only underscores how incompletely he connects with the song; he might as well be repeating lines from a foreign-language tutorial.

Rose does make contact with the Dead Boys’ Ain’t It Fun, whose weary fatalism suits his temperament. But the band’s take on the New York Dolls’ Human Being is tedious, and their choice of a Sex Pistols’ tune (the post-Johnny-Rotten Black Leather) is remarkable only for its obscurity. The real hero of “The Spaghetti Incident?” is bassist Duff McKagan, who’s on sufficiently familiar terms with the genre to pull off an affecting tribute to Johnny Thunders (a righthanded You Can’t Put Your Arms Around a Memory) and steer the band through the Damned’s proto-punk speedball New Rose. That’s as good as it gets on this album, which, overall, falls short of its source material.

**PAUL McCARTNEY**

**Paul Is Live**

CAPITOL 72438 27704 (77 min)

Performance: Value for money

Recording: Adequate

Here are the Top Ten reasons to buy “Paul Is Live,” even though it follows on the heels of a concert album from his previous tour (“Tripping the Live Fantastic”), released in 1990:

1. Sounds better than a bootleg.
2. You don’t have to watch Paul and Linda’s heavy-handed animal-rights film, which opened the shows, on a CD.
3. Packs twenty-four tracks on a single disc (well, twenty-three, if you discount the 45 seconds of cricket noise entitled Welcome to Soundcheck).
4. Linda’s nowhere to be heard.
5. Paul performs Kansas City in Kansas City.
6. His repertoire holds up better than Ringo’s.
7. Early Beatles stuff is wonderful, especially Drive My Car, We Can Work It Out, All My Loving, Paperback Writer, and I Wanna Be Your Man.
8. Includes only four songs from his last album, two of them (Peace in the Neighborhood, Hope of Deliverance) actually worth hearing.
9. It’s a real live album, complete with bum notes and foibles that make it all the more human.
10. Album cover is a brilliant spoof on the “Abbey Road” jacket and Paul-is-dead rumors, depicting Paul (wearing shoes this time) being dragged across the road by his sheepdog.

**FRANK ZAPPA**

**The Black Rider**

BARKING PUMPKIN 71600 (72 min)

Performance: Harrowing

Recording: Good

Imagine being five years old, going to the carnival for a splendid day of cotton candy and hilarity, and instead getting accidentally locked in the chamber of horrors—all day, by yourself. That’s good preparation for “The Black Rider,” a theatrical tour through hell, with your guides Tom Waits and William Burroughs. Loosely based on a work of German romantic literature, “Ge- spensterbuch,” published in 1811, “The Black Rider” revolves around a clerk named Wilhelm, who works a deal with the devil to win the hand of a winsome lass only to lose everything in the bargain. As on his recent albums, Waits mines instrumental sounds from what sounds like the pipeline to the Netherworld itself—menacing bass clarinets, sadistic percussion, homicidal cellos, and marimbas on the lam. His vocals sound drawn across broken glass and rusty nails, and filtered through bubbling blood. That combination, married to Burroughs’s lyrics (“Wilhelm’s cutting off his fingers / So they’ll fit into his glove”), makes for a most unsettling visit. And, depending on your perspective, a visit most tedious. Or brilliant. Probably a little of both.

**TOM WAITS**

**The Black Rider**

ISLAND 314-518 559 (56 min)

Recording: Good

**FRANK ZAPPA**

**The Yellow Shark**

BARKING PUMPKIN 71600 (72 min)

Performance: Weird, wild stuff

Recording: Stellar

The Yellow Shark is the sound of musical anarchy in a menagerie. As a 90-minute program of nineteen Zappa compositions, it was performed in three European cities in 1992. Like everything else he did, Zappa’s orchestral music defies convention, often dissolving rhythm and harmonic relationships to explore the timbral and textural possibilities of the instruments. His approach is ornery in its fantastical illogic, but within the hermetic self-invented musical language of Zappa’s universe. “The Yellow Shark” makes a perverse kind of sense. If you’re willing to suspend “normal” expec-
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Robert Plant—Rock Critic Wannabe?

Former Led Zeppelin frontperson Robert Plant must have an interesting record collection. Asked to remake garage-rock perennial "Louie, Louie" for the soundtrack of Wayne's World 2 (Reprise 45465), Plant chose not to emulate the hit Kingsmen version or the lesser-known Richard Berry original. Instead, he picked up on the fabulously obscure 1964 rendition by the Sonics, a Northwest frat band that presaged heavy metal and punk before anyone dreamed of the term. Cool move, Bob, and a nice topper to your recent record-exhumations of worthy Sixties songs by Moby Grape and Tim Hardin. Suggested subjects for future research: Red Crayola, Autosalvage, Lothar and the Hand People.

JAZZ REVIEWS

DEE BRIDGEWATER
Keeping Tradition VERVE 607 (57 min)
Performance: Beguiling
Recording: Good

I first heard singer Dee Dee Bridgewater when she was in The Wiz on Broadway, and I was not impressed. Her subsequent appearances in the musical Sophisticated Ladies didn't do much for me, either. But then came a tenure with the Thad Jones—Mel Lewis Orchestra, and Bridgewater blossomed. Occasionally, she still sounds affected in her delivery, but most of what she does rings true, and she has developed into a fine jazz vocalist. "Keeping Tradition" is a 1992 trio date recorded in France with some European musicians who do their job well. I suspect the liner notes read better in the original French, but for now you won't find a more enjoyable Dee Dee Bridgewater album than this one.

C.A.

ORNELLE COLEMAN
Beauty Is a Rare Thing: The Complete Atlantic Recordings RHINO/ATLANTIC 71410 (six CD's, 427 min)
Performance: Epochal
Recording: Good

This Rubic's Cube of a reissue—Ornette Coleman's complete output for Atlantic from 1959 to 1961 minus an undisclosed number of never-released masters long ago destroyed by fire—is what practically everybody I know was listening to as last year drew to a close, myself included. The music affording us such pleasure is the same music scorned by many in the waning days of 1959, during Coleman's legendary six-month stand at New York's Five Spot. "Beauty Is a Rare Thing" brings together
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all six of Coleman's Atlantic studio LP's of that time, including the iconic quartet performances with Coleman on alto, Don Cherry on trumpet, Charlie Haden or Scott LaFaro on bass, and Billy Higgins or Ed Blackwell on drums; the spontaneously improvised "Free Jazz" with those six musicians plus Eric Dolphy and Freddie Hubbard; and the earthy "Ornette on Tenor," with Jimmy Garrison on bass. It adds the contents of three albums of odds and ends recorded during the same period but not released until the Seventies (one of these issued only in Japan) and two tracks from Gunther Schuller's "Jazz Abstraction" that represented Coleman's first plunge into the Third Stream. As it was on the original albums, the stereo separation on these six discs is rather severe, but that isn't really a drawback as it allows us to follow the bassists and drummers better as they clef the beat into different meters.

So much for the facts and figures, though it should be added that the most bracing of the "new" material is I Heard It on the Radio, a fast ballad subjecting the 32-bar pop-song form in general to the same sort of inquiry to which Charlie Parker subjected Embraceable You. At a time when the merest hint of a gospel cadence sufficed to establish a musician as a really soulful dude, Coleman threw in the entire church and the surrounding countryside. Suppressing harmony in the interest of melody and rhythm, he burst on the scene sounding like a rural Texas bluesman in an era when musicians prided themselves as much on their urbanity as on their harmonic sophistication. Assailed as both a primitive and an abstractionist (which would seem to be a contradiction in terms), he caught some of that day's most intrepid experimentalists by surprise, because instead of borrowing composi-

The Ella Fitzgerald "Song Books" set: a monument on sixteen CD's

SIONAL structures from Europe as they did, he made regenerative use of an older jazz vocabulary of smeared notes and collective improvisation.

This is where I'm expected to express bewilderment that music so vivacious could have stirred such controversy thirty-five years ago. But as jazz enters a phase of boring neo-classical recapitulation, Coleman's Atlantics sound as shockingly fresh today as they must have then. Like most boxed sets, "Beauty Is a Rare Thing" is pricey, but if you claim to like jazz, you can't afford to be without it. P.D.

ELLA FITZGERALD

The Complete Ella Fitzgerald Song Books

VERVE 832 (sixteen CD's, 910 min)
Performance: Handled with care
Recording: Excellent transfers

In the mid Fifties, after five years of trying to wrench Ella Fitzgerald from Decca, where she had been contracted since 1936, Norman Granz finally succeeded. Ella had scored a few hits, but Granz was convinced that Decca had grossly underestimated her talent and potential appeal to a wider (spell that w-h-i-t-e-r) audience, and he was itching to prove it.

At Decca, Ella's career had been structureless; she frequently recorded silly novelty songs, and little or no consideration was given to the appropriateness of her accompaniments. Granz changed all that; from the moment she stepped into her first Verve session, Ella Fitzgerald was magically transformed into a major interpreter of songs, a diva who would soon have America's top composers of popular music deeply indebted to her.

It all started with the "Song Books," a series of extraordinary albums on which Fitzgerald—much of the material she sang—underwent a rebirth. Granz's brilliant concept was to have her devote entire albums to the great twentieth-century composers and songwriting teams. Between 1956, when she premiered the series with the work of Cole Porter, and 1964, when the series ended with "The Johnny Mercer Song Book," Ella Fitzgerald rose to become a major international star. She made other excellent Verve albums, but the "Song Book" series—which also includes albums devoted to the works of George and Ira Gershwin, Duke Ellington, Harold Arlen, Irving Berlin, Rodgers and Hart, and Jerome Kern—remains a monument to her artistry, to American popular music, and to Norman Granz. The accompaniment—which, in the main, is by Nelson Riddle, Paul Weston, Duke Ellington, and Buddy Bregman—fits Ella like a pair of fine gloves.

Now Verve has assembled all the albums in a single release, "The Complete Ella Fitzgerald Song Books," which contains everything but the vinyl. Sixteen CD's, snugly inserted into miniatures of the original covers and boxes, have been lovingly packaged with the old, somewhat abbreviated liner notes and a new 120-page illustrated hardcover book containing illuminating essays, detailed discographical information, and an index of the 240 songs. It all adds up to over 15 hours of glorious music that ought to be offered on a layaway plan, because no discriminating pair of ears should be without it.

CHARLIE HADEN

Always Say Goodbye

VERVE 501 (70 min)
Performance: More movies
Recording: Very good

Bassist Charlie Haden's latest release, "Always Say Goodbye," continues the delicate weave of old and new that he began in 1991 with "Haunted Heart." The new album is a mix of recordings by his
current group and music that made an impression on him in the past—not only jazz, but the kinds of earfuls he absorbed listening to the radio and going to the movies as a child. It opened the door to the fantastic Max Steiner wrote for Warner Brothers in 1937 and goes right into the music from The Big Sleep, complete with Bogart dialogue. Then it's a smooth transition to the title tune, another Haden composition, Nice Eyes, and Charlie Parker's 'Relaxing at Camarillo.'

When Lester Young told me that Jo Stafford was his favorite singer I didn't quite understand it, but her perfect pitch has since swayed me. Haden is obviously impressed, too. Ms. Stafford, who sang the title tune on "Haunted Heart," makes an encore appearance here on Alone Together. Stephane Grappelli joins Haden's group for Where Are You My Love, which is then heard in the 1949 Grappelli/Django Reinhardt version. Other blasts from the past include Duke Ellington's orchestra playing Low Key Lightly, from Anatomy of a Murder—with a superlative violin solo by Ray Nance—and Chet Baker singing Everything Happens to Me. But this nicely compiled anthology proves that Cashman & West's early-Seventies wimp-rock was more appealing—and a lot funnier—than one remembers. Case in point: the genuinely clever title song, a lament (no kidding) about Randy Newman's lack of airplay.

S.S.

NINA SIMONE
Little Girl Blue
BETHLEHEM 30142 (56 min)
Performance: In the beginning...
Recording: Very good

Eunice Waymon was singing in a gay bar in Atlantic city when she made her first album for Bethlehem. It was 1958, when working in such places could ruin a career. Fearing that the parents of some of her Philadelphia music students might see her name in the bar's window, she changed it to Nina Simone. I was a disc jockey on WHAT-FM, Philadelphia's all-jazz station when the record came in, and I can recall how the phones lit up each time we played I Loves You Porgy. We told the record company that they had a hit, but they dismissed it as "local rumble." Well, it wasn't local for long, and to hear her magically weld her supple vocals to an absorbing, slightly Brubeckian piano style on this CD reissue of her debut recording is to understand why Nina Simone quickly became a household name. "Little Girl Blue" is one of those rare albums that keeps on giving with every track. Listen to the way Simone builds up Love Me or Leave Me, for instance, or to her incomparable reading of My Baby Just Cares for Me. The CD contains three bonus tracks, none of which are merely alternate takes.

Because so much happened to and for Nina Simone after this album first appeared, I wish the reissue producers had updated the original liner notes. The music, however, holds up. Don't leave a record store without it.

CASHMAN & WEST
The AM-FM Blues (Their Very Best)
RAZOR & TIE 78992 20212 (79 min)
Before these guys got rich producing records for Jim Croce they were moderately successful as a sort of poor man's James Taylor times two. But this nicely compiled anthology proves that Cashman & West's early-Seventies wimp-rock was more appealing—and a lot funnier—than one remembers. Case in point: the genuinely clever title song, a lament (no kidding) about Randy Newman's lack of airplay.

S.S.

ANK GEORGE GERSHWIN
Gershwin Plays Gershwin—
The Piano Rolls
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ANNE MURRAY
Cronin'
SBK 27012 (61 min)
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W.L.

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DON'T be put off by the terrible pun in the title of the Baltimore Consort's new CD, "La Rocque 'n' Roll." La Rocque Galliard is the name of one of the tunes, and the perpetrators were simply trying to point out that this is a recording of popular song-and-dance from Renaissance France.

The point is well taken. Pop music, even from 1571, should embrace a certain, well, joie de vivre. The Baltimore Consort has that in abundance.

Many of the selections here are simple melodies elaborated by the composers and performers. This is music with rustic origins, and the peasant stomp has not yet gone out of it. There are also classic fantasies about unrequited love, nymphs and shepherds, and a tumble or two in the hay. Sometimes pastoral romps, hymn tunes, drunken revels, children's rhymes, and battle songs get a bit mixed up, but that's the way it was back in the days of Rabelais.

None of it is performed with a long face or an overdose of concern about the composers' intentions. These performers intervene at every moment and make it all theirs. I would say that their versions are closer to the real spirit of the music than any academic reconstruction.

There is one potential that is missed. Like real rock-and-roll, much of this music is about sex—usually from a man's point of view. Custer La Rue, the group's wonderful soprano, is heartrending on the subject of a young woman forced to become a nun, but when singing about cuckoldry or sexy shepherdesses in the hay, she is a bit abstract. Fortunately, everything else is perfectly convincing and charmante. The others in the group play flutes, lutes, viols, guitars, recorders, crumhorns, bagpipes, even a drum. I don't know if this is the best old-music group in the country, but it is certainly the most fun.

E.S.

THE BALTIMORE CONSORT
La Rocque 'n' Roll
DORIAN 90177 (78 min)

and the violinist Chantal Juillet is a most sympathetic soloist in the first and longer one, which Bartok salvaged from the earlier work that was restored some years after his death as his Violin Concerto No. 1. The Divertimento for String Orchestra (1939), the last orchestral piece that he composed in Europe, is surely the most ingratiating of his major works, with a glorious mix of earthy vigor and suave elegance, playful wit and unfeigned warmth of heart. Dutoit's response to it is unreserved in enthusiasm and unsurpassed in polish; his solo players abundantly deserve their printed credits, and the mellow transparency of the recording suits this work down to the ground.

R.F.

BEETHOVEN: Symphony No. 9 ("Choral")
Soloists: Choruses; Leipzig Gewandhaus Orchestra, Masur
PHILIPS 432 995 (66 min)
Performance: Virile
Recordings: Spacious, full-bodied

BEETHOVEN: Symphony No. 9 ("Choral")
Soloists: Chorus, Royal Concertgebouw Orchestra, Sawallisch
EMI 54505 (68 min)
Performance: Well-mannered
Recording: Decent live pick-up

Kurt Masur's new Beethoven Ninth is a studio recording made during the Leipzig Gewandhaus Orchestra's 250th anniversary season, and Wolfgang Sawallisch's derives from Amsterdam concert performances in December 1992, but recording methodology isn't the only thing that distinguishes them.

Masur's first two movements are full of virility and purposeful energy, with tempos that are based on the new Critical Edition of the score (though well within traditional guidelines). To my ear, the result is eminently satisfactory, and he sustains a richly singing line throughout the slow movement, neither letting the music sag nor hurrying it unduly. The Leipzig Radio Choir and Gewandhaus Children's Choir display impressive body and discipline in the ever-challenging finale. The soloists—soprano Sylvia McNair, contralto Jard van Nes, tenor Uwe Heilmann, and baritone Bernd Weikl—acquire themselves splendidly for the most part (I would have liked a bit more heft in the famous opening solo than Weikl musters) and are well matched in the ensembles. In terms of spaciousness and body, the recording itself is as handsome as one could wish. Overall, this Philips CD ranks among the
A Star-Studded "On the Town"

On the Town, with music by Leonard Bernstein and book and lyrics by Comden and Green, is a wonderful piece of vintage New Yorkana, and the star-studded new recording led by Michael Tilson Thomas is fully worthy of it. Although often called a landmark, On the Town wasn’t really a radical departure for Broadway. On the contrary, it was squarely in the tradition of some of the great New York musicals of the Twenties and Thirties with its sophistication, swift satire, revue-like form, jazz flavor, and, ultimately, good heart. But what form, what flavor, what heart!

That form and flavor—and the heart—were heated up and melded in a crucible of swing, big-band jazz, blues, and modernism à la Prokofiev, Stravinsky, and Weill, but all seasoned in the inimitable Bernstein manner, in that combination of classical and pop/jazz that is so potent in his work. The originality and impact are not in the form but in the way things are put together as well as in the energy and intensity.

The new recording has it all together too. Thomas is a conductor in the Bernstein mold and equally at home in both worlds. He assembled a truly astonishing mixed cast for the London concert performances from which the Deutsche Grammophon CD was taken: Frederica von Stade and Tyne Daly, Thomas Hampson, Kurt Ollman and David Garrison. Those are just the leads. The supporting cast includes some promising kids by the name of Samuel Ramey in three smaller roles, Cleo Laine and Meriel Dickinson as two night-club singers, Evelyn Lear as the “No sex, girls” singing teacher, and co-author Adolph Green as a Coney Island pitchman. No kidding!

Unlike some opera-singer ventures into Broadwayland, there is nothing operatically false about this crossover casting; in fact, it works brilliantly because most of the casting is quite appropriate. Okay, Ramey is not quite as believable as a dock worker, but Von Stade makes a hilarious anthropology professor, and Lear’s Madame Dilly is certainly a dilly. This diverse group of star singers and outstanding personalities somehow adds up to an idiomatic ensemble that is perfectly at home with those crafty Bernstein rhythms and vocal lines and that works together seamlessly. In many ways, the star of the show is Hildy—the predatory taxi driver Brunhilde Esterhazy—and Tyne Daly is the quintessential (if somewhat breathless) Broadway belting babe. The contrast with the vocal variety all around her is in no way disturbing but contributes to some kind of cockeyed unity—Broadway to the nth degree but still recognizable as Broadway, and in one of its finest moments.

This is the show from which not only New York, New York comes but also the hilarious Carried Away and the exquisite Lonely Town. A special feature of the recording is the restoration of three numbers cut from the original. The vocal numbers are cool, but it is the dance sequences that really steal the show, not only on stage but musically as well. The years have not diminished the freshness of the music (orchestrated mostly by the amazing Hershey Kay, although four other orchestrators also worked with Bernstein), and it is a pleasure to hear it so well performed, recorded, and mixed.

London’s symphonic musicians (and choral singers) can now apparently handle this stuff as well as Americans, and Thomas gets maximum energy and punch from first-rate performers. The live recording is mostly but not always letter-perfect; in any case, the energy of a real performance more than makes up the difference.

BERNSTEIN: On the Town

Soloists; London Symphony, Thomas Deutches Grammophon 437 516 (75 min)

BALTHUS: Symphony No. 1

Boston Symphony Orchestra, Munch

Symphony No. 5

Chicago Symphony Orchestra, DePreist

Cedille 90090 016 (58 min)

Performance: First-rate

Recording: Good

A student of Messiaen, Hindemith, and Boulez and in the early 1950’s, Easley Blackwood has been on the University of Chicago music faculty since 1958—prominent as a composer, a researcher into the more subtle aspects of harmony, and a superb interpreter of early twentieth-century piano music. During the thirty-five years separating his First and Fifth Symphonies, he explored avant-garde styles but eventually rejected them in favor of his own brand of mainstream conservatism.

The Symphony No. 1, from 1955, was recorded by the Boston Symphony under Charles Munch thanks to a Serge Koussevitzky International Music Fund Award (the recording was originally released by RCA in 1960). It stands up remarkably well, not only as an example of the American symphonic aesthetic prevailing when it was written but simply as a piece of music. The opening movement, introduced with a dissonant proclamation, is very well put together and highly effective in its contrasts. The slow movement, growing out of a unison melody for winds, is the best of the four, though I also enjoyed the scherzo, whose two-part counterpoint is reminiscent of Mahler and Shostakovich. The broody, rather free-form finale ends in a coda, but it’s no letdown. The performance is superb, and the sound holds up very nicely.

The three-movement Fifth Symphony is unabashedly neo-Romantic and less highly charged than the First, but effective in its own quiet way. I sense echoes of British pastoral in the opening movement. A long melodic line, with prominent oboe cantilena, lends special appeal to the somber slow movement, which also features subtle textual references to the Dies Irae plainchant. The finale is Mendelssohnian, with echoes of the “Italian” Symphony. The performance, recorded in concert at Chicago’s Orchestra Hall in 1992, is completely satisfying. D.H.
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ELGAR: Violin Concerto
Zukerman, Saint Louis Symphony, Slatkin
RCA 61672 (51 min)
Performance: Romantic
Recording: Excellent

Only a generation or two ago, conductors were bent on making Elgar's music seem more "manly," emphasizing its elements of patriotic bombast and downplaying the emotionality. Today the emphasis is inverted, and Leonard Slatkin vents the music's expressive side so liberally in this performance that it resembles one of Mahler's emotional fever charts—and is all the more moving as a result. His tempos are so fluid and free that the huge orchestra Elgar called for becomes an ocean where the listener could drown, the only stability provided by the conductor's force of personality and intimate understanding of the music.

Given Slatkin's approach, Pinchas Zukerman is an odd choice as soloist. He rarely lets even the most feverish music ruffle his composure or alter his consistently suave, tonally lustrous style, and at times he doesn't seem up to the heroic aspects of this long concerto, such as in the coda of the first movement. But his reading of the affectionate second movement is lovely, and he often seems caught up by Slatkin's passionate conviction. While Nigel Kennedy's EMI recording remains the best modern version of the concerto, admirers of Slatkin's previous recordings won't want to miss this one.

MAHLER: Symphony No. 3
Van Nes: choruses. Berlin Philharmonic, Haitink
PHILIPS 432 162 (103 min, two CD's)
Performance: Good to superb
Recording: Very good

"A symphony should be like the world," Mahler once observed to Jean Sibelius. "It should embrace everything." His amazing Symphony No. 3 certainly exemplifies that dictum, and these days it does not lack for fine recordings.

Bernard Haitink's handling of the blazing horn summons at the start and the subsequent orchestral growlings and proclamations suggest that this will be a lackluster performance, but once the main body of the movement, with its jaunty march rhythms, is under way the performance goes from strength to strength. The bucolic second movement has a lovely sense of flow, with tempos that are flexible but never mannered—a true song without words. The martial third movement's always delightful "Bimm bamm" chorus.

Georg Solti's recordings of Haydn symphonies have sometimes conjured up odd images of Godzilla trying to polka. After all that stony Mahler and Wagner, how could he be expected to scale his vision down for music as modest and sunny as Haydn's? But over and over in Solti's recording career, he has confounded his critics when it comes to works involving vocal narrative. The series of picturesque musical vignettes that make up The Seasons gives him lots of imagery to respond to, though he avoids the kind of broad, obvious strokes that can make the piece seem overly precious.

The result is a highly competitive recording. The Chicago Symphony Chorus and Orchestra are self-recommending, even if their performance occasionally overloads the relatively slender orchestration. And if the vocal soloists—Ruth Ziesak, Uwe Heilmann, and René Pape—aren't the biggest international names imaginable, they all in vivid, charismatic performances and display a wonderful sense of ensemble, both with the chorus and among themselves. Although this is a live recording, the singers achieve a remarkable intimacy, and except for the recitatives, which sound a bit puny, it gives quite a flattering sonic picture of Chicago's Orchestra Hall.

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offer, it would be worthwhile for the finale alone.

D.H.

PUCCINI: Manon Lescaut
Soloists: Metropolitan Opera Chorus and Orchestra, Levine
LONDON 440 200 (two CD's, 120 min)
Performance: Variable
Recordings: Outstanding

The revival of Rossini’s pseudo-operatic pageant Il Viaggio a Reims (The Voyage to Reims) was the sensation of the 1983 Rossini Festival in Pesaro, Italy. Deutsche Grammophon’s live recording with a group of stellar Rossinians and the Chamber Orchestra of Europe under Claudio Abbado earned fairly unanimous plaudits. Now anchored in Berlin, Abbado assembled a similarly distinguished cast for a series of performances and this recording with the Berlin Radio Chorus and Berlin Philharmonic—and scored again. The orchestral execution is, as before, superb. There are occasional imperfect audio balances but nothing of a damaging kind, though to me Sony’s highly touted Super Bit Mapping recording technology offers no noticeable improvement over DG’s sonic.

Among the Pesaro veterans, the basses Samuel Ramey (as the dotty English lord) and Enzo Dara (as the German musical pedant) are as good as ever. Ruggero Raimondi (Don Prudenzio, the rabid collector of antiques) has lost some of his tonal luster since the earlier recording, but he still delivers his irresistible guttural aria with consummate gusto. That comic spirit is shared by Lucia Valentini Terrani (Marchesa) and Giorgio Surian (Don Prudenzio), but neither sings with the tonal steadiness of years past.

Outstanding newcomer is the delightful and virtuosic soprano Sylvia McNair (Corinna), whose extended duet with the dulcet-voiced tenor Raul Gimenez is one of the set’s many highlights. Cheryl Studer (Madame Contese) surpasses her DG counterpart in the accuracy of her coloratura, a quality she shares with soprano Luciana Serra (Countess Folleville), though Serra’s brilliance is less consistent. Tenor William Matteuzzi displays a thinnish sound, but his upper extension is seemingly limitless.

Everyone seems to have entered into the joyous spirit of this exceptional brainchild of Rossini. The production moves smoothly, and the well-deserved applause appears only at the end. Both old and new versions of Il Viaggio are recommended: you cannot lose with either.

G.J.

SHOSTAKOVICH: Piano Quintet; Four Waltzes; Piano Trio No. 2
Nash Ensemble
VIRGIN 59312 (70 min)
Performance: Crisp
Recording: Excellent

The increasingly popular coupling of Shostakovich’s big-boned Piano Quintet and his more anguished Piano Trio No. 2 is augmented here with four witty, breezy
waltzes for flute, clarinet, and piano. The gracious facades of these pieces drawn from his film scores and ballets never crack, yet the music always seems on the verge of a smirk.

The Nash Ensemble’s performances of the quintet and trio compare well with the others available. The recorded sound is far better than in the classic account of the quintet by Sviatoslav Richter and the Borodin Quartet on EMI, and the Nash players have more experience as an ensemble, which enables them to reveal more of the music’s glinting, metallic edges and the piquant voicing tricks that Shostakovich sprinkled through it. Their performance of the trio, slightly slower than the equally excellent one by the Beaux Arts Trio on Philips, is well-thought-out, highly personal, and, again, executed with great precision, making this release as enjoyable as it is important.

D.P.S.

WAGNER: Das Rheingold
Soloists: Bayreuth Festival Orchestra.
Barenboim
TELDEC 91185 (1:49 min, two CD’s)
Performance: Very good
Recording: Effective

The first recorded installment of the 1991 Bayreuth Festival Ring cycle conducted by Daniel Barenboim, this performance was released simultaneously on videotape and laserdisc. Considering that it was recorded at a public performance, the results on CD—even the extraneous stage noises—are extremely effective, providing a real “you are there” experience. Barenboim revealed himself as a formidable Wagner interpreter in his 1991 Berlin Parsifal recording (also on Teldec), and he is no less of one in this Ring-cycle prologue, which maintains an excellent sense of flow from its beginning in the depths of the Rhine to its end with the entry of the gods into Valhalla.

The characters of Wotan, Loge, and Alberich are the underpinnings of any Rheingold, and these roles, as well as the others, are remarkably well cast here. John Tomlinson’s Wotan seems less the imposing king of the gods than the Nietzschean “human, all too human” caught in the web of his own broken promises. Gunter von Känel doesn’t sound as malevolent as some Alberichs I have heard; as with Tomlinson’s Wotan, a human dimension—even pathos—shows through. Graham Clark is quite an extraordinary Loge, going beyond the character’s mere trickster aspect to convey something of the “moribund malignity” ascribed to Shakespeare’s Iago. And it is good to hear Alberich and Loge sung rather than snarled. Helmut Pampuch delineates Mime to fine effect, Linda Finnie gives us a stately and knowing Fricka, and Birgitta Svenden, as Erda, handles her brief but crucial assignment very well indeed.

The Bayreuth Festival Orchestra responds splendidly throughout, and if the recording does not quite match the vividness and refinement of Georg Solti’s pioneering 1959 London set, it is highly effective on its own terms.

D.H.

THE BASIC REPERTORY ON CD

The new, 1994 edition of this critical discography of the most often performed symphonic music is now available. To receive your copy, send a self-addressed business-size (#10) envelope, stamped with 524 postage, and a check or money order for $3 payable to Stereo Review (no cash, please), to The Basic Repertory, Stereo Review, 1633 Broadway, New York, NY 10019. Orders from outside the U.S. must be accompanied by a self-addressed envelope and $4 (payable in U.S. funds).
Very Warm for May, neatly mixing well-known songs with less-familiar gems. The sound is splendid, and the detailed notes are a treasury of their own. Roy Hemming

A BAROQUE CELEBRATION
New York Kammermusiker, Pederson DORIAN 90189 (61 min)
The New York Kammermusiker, or Chamber Musicians, are all, save a harpsichordist and a percussionist, double-reed players. Oboes and bassoons make up what the poets of the golden age of the Baroque would have called a "plangent" ensemble—penetrating, piquant, sometimes dancelike, sometimes lyrical and sad, sometimes comic and folksy, sometimes formal and out-of-doorsy. The selections here—arranged from various sources, including suites from operas by Purcell and Lully and Handel's Water Music—are a bit flattened out by the uniformity of the sound, but everything works pleasantly in these sturdy performances. E.S.
Jerry Hadley

The tenor who held Elvis’s guitar

By day, however, Hadley is hardly a dutiful supporter of the operatic status quo. He’s more street-smart and worldly than his fresh-faced, I-grew-up-in-Peoria (which he did) looks would suggest. His opinions are precise. His approaches are thoroughly considered. He needs those qualities, because however normal his opera-house life is, his recording life shows him charting a course through options few other opera singers have had to consider. In a recent flurry of recording activity that included Mozart’s Cosi Fan Tutte (Telarc) and Gounod’s Faust (Teldec), he also put together a Frank Sinatra/Jimmy Webb-inspired collection of pop standards with big-orchestra arrangements titled “In the Real World” (released by RCA in February), researched a projected RCA album of arias from forgotten American operas, and recorded (also for RCA) a collection of operetta arias titled “Golden Days” that includes a posthumous duet—Natalie Cole style—with Mario Lanza.

He offers no apologies for his crossover efforts, even though some critics might think he should—at least for his participation in Paul McCartney’s much-maligned Liverpool Oratorio. “The critics aren’t the ones buying the recordings,” Hadley said. “From my point of view, it was one of the greatest creative experiences of my life and something I’ll treasure till the day I die,” adding that McCartney also let him hold his prize possession, a guitar that once belonged to John Raitt. “We wanted to evoke ‘The Age of Innocence’,” the ambiance of New York City when that kind of music was in vogue,” he said. “We tried to recreate the theatrical orchestra of that time—some of the songs are orchestrated as if they’re being played at a Central Park band shell. Another is an old-time vaudeville number. I Love to Go Swimmin’ with Women, which I do as a duet with Tony Randall. The Lanza duet was an afterthought. RCA owned the existing tracks of Lanza singing Golden Days in a wonderfully personal and intimate way. I had to allow that intimacy to influence the way I did the part on my own.”

Hadley has no intention of minimizing his opera career. His interest in future roles ranges from the vocally florid bel canto operas of Donizetti to slightly heavier fare such as Britten’s Peter Grimes. And though the grand egos, incessant traveling, and foreign-language barriers of the opera world make his life more difficult than he ever imagined it would be, Hadley has worked too hard to get to the top to quit.

“When I was at the University of Illinois, I was never the one of whom people said, ‘Wow, that’s a great voice.’ I worked really hard to learn how to sing. I was never a contest winner.”

But nonoperatic work was offered to Hadley almost as soon as his career developed, because his voice is unusually versatile. “I was never the one of whom people said, ‘Wow, that’s a great voice.’ I worked really hard to learn how to sing. I was never a contest winner.” But nonoperatic work was offered to Hadley almost as soon as his career developed, because his voice is unusually versatile. “I was never the one of whom people said, ‘Wow, that’s a great voice.’ I worked really hard to learn how to sing. I was never a contest winner.”

By night, Jerry Hadley is more normal than one would ever expect an operatic tenor to be. He drives himself from his home in rural Connecticut, where he lives with his wife Cheryl and two sons, down to the Metropolitan Opera, where he’s like a dutiful supporter of the operatic status quo. He drives himself from his home in rural Connecticut, where he lives with his wife Cheryl and two sons, down to the Metropolitan Opera, where he’s like a dutiful supporter of the operatic status quo. He drives himself from his home in rural Connecticut, where he lives with his wife Cheryl and two sons, down to the Metropolitan Opera, where he’s like a dutiful supporter of the operatic status quo. He drives himself from his home in rural Connecticut, where he lives with his wife Cheryl and two sons, down to the Metropolitan Opera, where he’s like a dutiful supporter of the operatic status quo.

“The crit- ers aren’t the ones buying the recordings,” Hadley said. “From my point of view, it was one of the greatest creative experiences of my life and something I’ll treasure till the day I die,” adding that McCartney also let him hold his prize possession, a guitar that once belonged to Elvis Presley. Recalling “the success I’ve had with recordings of Show Boat and Candide,” he called these shows “part of my cultural heritage. [Performing them is] what we’ve grown to expect from operatic tenors. When you go to a conservatory to study classical music . . . you get a little bit of tunnel vision. You become judgmental—as opposed to discerning.”

The forthcoming “Golden Days” album is hardly just another glance back at turn-of-the-century kitsch.
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Break-Ins

To augment the Magneplanar loudspeakers recently installed in the Yellow Room (“The High End,” January 1994), I have ushered in a 220-watt Parasound HCA-2200II power amp, largely to see how the Maggies fare in different electronic environments. The Parasound, a design of the celebrated John Curl, seemed an apt choice, and a practical one, its cost of about $4 per watt making it a high-end bargain. Of course, since the Maggies are noteworthy for their amiable, relatively non-reactive load they present, and since the Curl creations are intended to be unflappable in the face of the worst sorts of loads, it may seem that the pairing was chosen to give the overall system an unrepresentatively easy time of it. Not to worry, however. If trouble is sought, getting it from a new, essentially untried audio system seems always to be an effortless affair.

In this instance, the complaint provoked can be described only in subjective terms, and would not be worth describing at all if it had not been so unexpected. Superior or at least equivalent performance to that of the former match-up had been expected from the outset, and it was bewildering when things immediately took a different turn. Principally, the impression was of a spatial jumble—a lack of focus and coherence—that made me imagine the midrange panel had been moved several inches further from the tweeter, and perhaps buffered in phase with it as well. It was not the sort of thing I ever expect to hear from a new amplifier, and for once it sent me straight to the operating manual to see if perhaps some intricacy of setup had been ignored. There I discovered the following: “Like other great power amplifiers, the HCA-2200II requires at least 72 hours of continuous operation after it is first turned on to sound its best.” Here was indeed something that had been ignored, but what was it precisely?

Many audiophiles have long believed that new equipment needs a break-in period before a degree of operational stability is achieved, and for devices having mechanical aspects it is easy to view their case sympathetically. Even Magnepan states that the Yellow Room’s new speakers will drop somewhat in resonance frequency with age. But for a modern amplifier, whose stability is—or had better be—imposed and regulated by essentials of proper design, there is far less reason to expect that many trips around the block and an oil change are in order. In fact, I have never seen such a process suggested in any other manual. I called Parasound to learn just how I should best proceed (a simple passive burn-in was fine, the company said), and in time I was able to persuade myself that I was hearing substantial improvements. I was not, however, able to persuade myself that I wasn’t also just hearing “things”—things of the notoriously susceptible audiophile imagination. So I began inquiring of people who take the objective reality of such things very seriously and who believe they exist for all who pay attention to hear.

John Curl himself seemed as good a source as any. A physicist as well as an engineer, Curl was not actually the author of the Parasound break-in advisory, but he seemed quite comfortable with its existence. “You simply have to take certain things on faith,” he remarked. “If a thing seems to work out in some particular way, so be it.” He then described a problem he had encountered with humidity in fiberglass circuit boards, requiring the moisture to be baked out over time before a design would behave. He also cited the well-rehearsed mysteries of capacitor forming (it is simply not cost-effective for an amplifier company to electrically “form” capacitors to their ultimate performance characteristics during manufacture, so the end consumer is made to do the forming unwittingly in the process of using the equipment), and even the forming of simple electrical connections, presumably subject to expansion and contraction through thermal and other stresses. He emphasized throughout that physics in no way denies the possibility of perceptible sonic alterations occurring during these seemingly minute stabilizations. Others have suggested even more infinitesimal considerations.

Dear reader, do we, the true hardheads and rationalists in a world riotous with speculation, believe in a cosmos perceptibly regulated by such minutiae? Perhaps, if we’re honest, we say we don’t know. But one thing is clear: If we’re sincere about finding out, it will cost us only some of the household current we’d be expending anyway, and possibly some delight in equipment whose sound we once loved but that has now been “broken in.”

Ralph Warren Hodges, Jr. (1943-1994)

“Break-Ins” is the last piece Ralph Hodges wrote for Stereo Review before he died, of cancer, on January 7. He was fifty years old.

Ralph had been associated with this magazine since 1969, when he was appointed Associate Technical Editor. A few years and many articles and columns later, he became Technical Editor, a position he held until he decided to move to California and a job with Dolby Labs in 1979. In the early Eighties, as a free-lance writer and reviewer, he wrote several articles for Stereo Review, and he became a regular contributor in 1984, when he began writing a new monthly column called “The High End.” The column was his for ten years, gathering many faithful readers who appreciated his style and respected him for the way he approached his subject.

Some years ago, an editor here asked Ralph if he could define “audiophile.” After a little thought, Ralph replied, “No, I can’t define it, but I am one.” And so he was. His family, friends, and colleagues also remember him as a gentle, generous man who loved music and good sound and did what he could to help others understand and love it too. We will miss him greatly.

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