stereophile
RECOMMENDED COMPONENTS
Components listed here are ones which have been formally reviewed in Stereophile and have been found to be among the best available in each of four or five quality classes. Whether a component is listed in Class A or Class E, we highly recommend it's purchase.

Each listing—in alphabetical order within classes—is followed by a brief description of the product's sonic characteristics and a code indicating this Stereophile Volume and Issue in which that product's report appeared. Some products listed have not yet been reported on; these are marked (NR), for "Not Reviewed." We recommend that any product's entire review be read before purchase is seriously contemplated (products without reviews should therefore be treated with more caution)—many salient characteristics, peculiarities, and caveats appear in reviews, but not here. To obtain back issues of the magazine, see the advertisement in this issue. (We regret that we cannot supply photocopies of individual reviews.)
Components, in general, do not remain listed for more than three years unless at least one of the magazine's writers and editors has had continued experience of it. Discontinuation of a model also precludes its appearance. In addition, though professional components—recorders, amplifiers, monitor speaker systems—can be obtained secondhand and can sometimes offer performance which would otherwise guarantee inclusion, we do not generally include such components. Apart from that exception, Stereophile's "Recommended Components" listing is almost exclusively concerned with products currently available in the US through the usual hi-fi retail outlets.

**How recommendations are determined**

The ratings given components included in this listing are predicated entirely on performance—i.e., accuracy of reproduction—and are biased to an extent by our feeling that things added to reproduced sound (eg, flutter, distortion, colorations of various kinds) are of more concern to the musically oriented listener than things subtracted from the sound (eg, deep bass or extreme treble). On the other hand, components markedly deficient in one or more respects are downrated to the extent that their deficiencies interfere with the full realization of the program material.

**How to use the Listings**

Read carefully our descriptions here, the original reviews, and (heaven forbid) reviews in other magazines to put together a short list of components to choose from. Carefully evaluate your room, your source material and front end(s), your speakers, and your tastes. With luck, you may come up with a selection to audition at your favorite dealer(s). "Recommended Components" will not tell you just what to buy any more than Consumer Reports would presume to tell you whom to marry!

**Class A**

Best attainable sound for a component of its kind, without any practical considerations; "the least musical compromise." A Class A system is one for which you don't have to make a leap of faith to believe that you're hearing the real thing.

**Class B**

The next best thing to the very best sound reproduction; Class B components generally cost less than Class A ones, but most Class B components are still quite expensive.

**Class C**

Somewhat lower-fi sound, but far more musically natural than average home-component high fidelity; products in this class are of high quality but still affordable.

**Class D**

Satisfying musical sound, but these components are either of significantly lower fidelity than the best available, or exhibit major compromises in performance—limited dynamic range, for example. Bear in mind that appearance in Class D still means that we recommend this product—it's possible to put together a musically satisfying system exclusively from Class D components.

**Class E**

Applying only to loudspeakers and phono cartridges, this "Entry Level" classification includes products that may have obvious defects, but are both inexpensive and much better than most products in their mid-fi price category.

**Class K**

"Keep your eye on this product." Class K is for components which we have not tested (or have not finished testing), but which we have reason to believe may be excellent performers. We are not actually recommending these components, only suggesting you take a listen. Though the report has yet to be published in certain cases, the reviewer and editor sometimes feel confident enough that the reviewer's opinion is sufficiently well-formed to include what otherwise would be a Class K entry in one of the other classes, marked (NR).
We try to include in "Recommended Components" every product which we have found to be truly excellent or which we feel represents good value for money. Bear in mind that many different tastes are represented. The listing is compiled after extensive consultation among Stereophile's reviewing staff, editors, and publisher, and takes into account continued experience of a product after the formal review has been published. In particular, we take account of unreliability and defects that show up after extended auditioning. The fact that a product received a favorable review cannot therefore be regarded as a guarantee that it will continue to appear in this listing.

The prices indicated are those current at the time the listing was compiled (August 1994). We make no guarantee that any of these prices will not have changed by the time this issue of Stereophile appears in print.

Where we have found a product to perform much better than might be expected from its price, we have drawn attention to it with a special symbol next to its listing: $$$$. We also indicate with a ▽ products that have been on this list in one incarnation or another since the "Recommended Components" listing in Vol.14 No.10 (October 1991). Longevity in a hi-fi component is rare enough that we think it worth indicating (although it can also indicate that the attention of design engineers has moved elsewhere).

We are not sympathetic toward letters complaining that the Symphonic Bombast A-123 Mk.VJa, which we recommended heartily two years ago, no longer makes it into "Recommended Components" at all. Where deletions are made, we endeavor to give reasons (there are always reasons). But remember: Deletion of a component from this list does not invalidate a buying decision you have made.


**Turntables**

**Editor's Note:** Any audiophile worth his or her salt should (unless exclusively committed to CD) consider at least one of our Class D recommendations—or, preferably, one of the Class C turntables and their variants—as the essential basis of a musically satisfying system. An in-depth audition as part of a preferred turntable/arm/cartridge combination before purchase is mandatory. The point should also be made that these are lean times for turntable manufacturers—Larry Archibald's advice is, "Buy while you can." If an inexpensive turntable has not made its way into Class D or is not listed in Class K, do not assume that it is recommended by default. Underachievers are more common in the world of turntables than in any other area of hi-fi.

A **Forsell Air Force One Mk.II:** $20,500

Sophisticated two-chassis, air-bearing Swedish "table with thread drive and parallel-tracking, air-bearing tonearm. JS enthused over its 3-D image solidity, tight, deep bass, super-plush midrange, and "enormous palpability factor." Very similar Forsell Air Reference ($12,500) lacks the separate air-bearing Flywheel drive system, using an internal motor and a silicone-rubber belt. (Vol.17 No.1)

Linn **Sondek LP12 with Lingo power supply:** $2645-$2745 (depending on finish) $$$ *

Compared with the Valhalla model, the Lingo-equipped version minimizes the LP12's propensity for a slightly fat midbass, subjectively extending the low frequencies by another octave. The Lingo upgrade alone costs $1295. The Trampolin suspension reduces the effect of the support. New Cirkus bearing/subchassis, now fitted as standard, costs $495 inc. labor as upgrade kit, and further extends and tightens the turntable's bass, leading to a Class A rating, according to MC, JA, and LG (as long as a good support is used, adds MC). Though CG feels that the LP12/Cirkus loses a certain something compared with the original version, he still concluded that "the LP12 ranks as one of the finest high-end audio products on the market today." "A deeper, more profound silence," enthuses WP over the Cirkus mod, adding that what stunned him was "the extent to which surface noise receded into insignificance." Superbly low measured rumble and excellent speed stability reinforce the feeling of maximum musical involvement offered by this classic belt-drive turntable. Good isolation from shock and vibration. While the felt mat doesn't offer the greatest degree of vibration suppression within the vinyl disc, what absorption it does offer is uniform with frequency. Despite flirtations with other decks, JA remains true to the basic design he has used now for over 16 years. (Vol.14 No.1, Vol.16 No.12, Vol.17 No.5)
Basis Ovation Mk.II: $5400
This well-engineered turntable combines a high-mass platter with a superb suspension and a precision drive system. According to DO, the Ovation offers awesome bass definition, incisive spatial resolution, and an exceptional feel for recorded hall ambience. DO's reference. Works nicely with the Graham L5t tone-arm, but requires a shim (available from Basis) for proper VTA range. Just fails to reach Class A, due to its lack of a vacuum hold-down system. (Vol.16 No.7)
SOTA Cosmos: $4400
“Does it boogie?” asks MC, adding that “very few of the big turntables do.” TJN thought very highly of the Cosmos, however, feeling that it offers a more contrasty sound than the SOTA Star, and with greater inter-transient silence. The subjective result was that small details were better resolved with the more expensive turntable. The low end, too, betters the Star in detail and clarity. TJN did feel, however, that purchasers might want to experiment using the Cosmos without SOTA's supplied “Groove Damper” mat. In systems which lean toward warmth, the mat led to “a slightly more closed-in sound that tempered the feeling of the unrestricted top end that is one of the Cosmos's principal strengths.” In leaner-sounding systems, however, the overall balance with the mat might be preferred. A high-gloss black finish adds $600 to the price, and a dustcover adds $250. (Vol.13 No.7, Vol.15 No.3; see also TJN's SOTA Jewel review in Vol.15 No.4.)

Linn Sondek LP12 Valhalla: $1745-$1845 (depending on finish)
The standard against which newer turntable designs have been measured for 17 years now, the Linn is felt by some to be more colored than the other Class C 'tables, particularly in the upper bass. Latest version has a laminated armboard and Cirkus bearing/sub-chassis ($495 inc. labor as upgrade kit), which result in a considerably more neutral sound. Certainly it's harder to set up and is more likely to go out of adjustment, though with the latest springs, Trampolin suspension, glued subchassis, and Cirkus mod, it's now much better in this respect. (Low-bass extension suffers when the LP12 is not set up correctly.) A version with a Basik power supply is available for $1395-$1495, depending on finish. (Vol.7 No.2, Vol.13 No.3, Vol.16 No.12)
VPI HW-19 IV: $1800
The Mk.III version of the VPI 'table (still available for $1200) was cosmetically more elegant than the original and achieved a standard of sonic neutrality that put it close to the SOTA Star Sapphire, and at a significantly lower price. Borderline Class B. The Mk.IV version is better still, the music arising from a velvet-black background, thought GL, with significant improvements in soundstaging and resolution. An upgrade with a standard Mk.IV platter from older HW-19s costs $750; with a TNT Series 2 platter, the upgrade costs $850; an acrylic armboard for the ET 2 costs $50, while the special 9"-thick armboard for the ET 2 when the TNT platter is used costs $100. The HW-19 readily accommodates a wide range of tonearms—the ET 2 air-bearing design, in particular—and is very stable. The $400 Power Line Conditioner (see Vol.12 No.2) is an essential accessory. The '19 can be upgraded to TNT status. (Vol.8 No.4, Vol.9 Nos.4 & 9, Vol.12 No.11, Vol.15 No.8; see also Vol.13 No.7, p.112, and GL's ET 2 report in Vol.14 No.10)
Well Tempered Classic Turntable: $2495 (inc. arm) ×
An integrated belt-drive turntable/tonearm combination featuring an acrylic platter and a unique four-point wobble-free bearing. Lacks a suspension, but is designed with attention to detail, particularly concerning maximizing of speed stability and the rejection of motor noise. Most obvious sonic characteristic is stability, both in speed and harmonic structure, coupled with cleaned-up sound quality: “The quiet between the notes is suddenly more silent,” said AH in his review. In addition, dynamics seem to be enhanced, though the sound is more lightweight than that of, say, the VPI. The Black Damped Platter is now standard, and is also available for $330-$440, depending on vintage of turntable. GL feels that the new platter will go a long way toward alleviating the WTT's lightweight balance. “It should bring pleasure to a lot of record collectors—borderline Class B,” was his conclusion, though he finds the Well Tempered Arm's cartridge clips rather fragile. RH recommends the various Marigo Audio Labs modifications—Well-Damped Arm Clamp ($299), Micro Suspension System & Motor Terminator Kit ($239, now height-adjustable), and, for those with the old platter, the Platter Interface System ($199), which can also be used on other turntables—see RH's review in Vol.16 No.4. (Vol.11 No.3, Vol.16 No.4; see also GL's review of the Fountainhead base in this issue.)

Rega Planar 3: $649 (inc. arm) ×
Synergistic mix of no-nonsense deck with superb arm (included). Lack of environmental isolation may be problematic (see “Letters” in Vol.16 No.10). Limited cartridge compatibility, but a safe Class D recommendation nevertheless. Can be obtained in a dedicated version for playing 78s. (Vol.7 No.1, Vol.8 No.6)
Roksan Radius: $1495 (inc. arm)
Well-made and stylish belt-drive turntable with quartz-referenced motor supply and integral Tabriz tonearm. Minimal suspension consists of three rubber spheres that separate the two halves of the plinth. While not as coloration-free as the Well Tempered Record Player, the Radius has a better-defined bass register, with a good sense of rhythmic vitality. Tonearm lacks midband transparency, though CG found that dampaing the armtube with Sumiko's Arm Wrap helped enormously in this regard. Works best with Roksan's own Cortex Black cartridge. Borderline Class C, says KK. (Vol.16 No.8)
SOTA Comet: $550 (inc. arm) $$$
Bare-bones, belt-drive turntable relies on high-mass/ plinth for environmental isolation, but captures what GL defined as the “soul” of the music, with an uncolored midrange, excellent detail (except at high playback levels), good depth, but only fair stereo imaging, using the Blue Point Special cartridge. Price includes LMT-II tonearm. Reflex Clamp ($150) an essential accessory. (Vol.16 No.8)
VPI HW-19 Jr.: $600 $$$ ×
Well-constructed belt-drive turntable featuring an excellent disc-clamping system. No suspension, due
to upgrade path to fully fledged HW-19 being incorporated into design. GAG therefore recommends a wall-mounted isolation shelf (such as the Target) to get the best performance from the Jr. Available for $950, ready-fitted with AudioQuest PT-6 tonearm.

West Coast price is $25 higher. (Vol.12 No.10)

Well Tempered Record Player: $1495

Somewhat fussy to set up, but when done right, the WTRP 'table/arm combination provides coloration-free sound with a clarity and resolution that belie its price. Possesses a more laid-back, more musically natural balance than the Linn Axis, but does not achieve this by suppressing recorded detail. Low-bass performance is intrinsically a little soft, but can be finetuned by playing with the damping arrangement. Borderline Class C performance with the latest plat-ter, according to CG. (Vol.14 No.7, Vol.16 Nos.2 & 10)

Deletions

Basis Debut Gold Standard replaced by Mk.II, not yet auditioned; VPI TNT replaced by TNT 3, not yet auditioned; Linn Axis discontinued; Oracle Delphi Mk.IV, Roksan Xerxes, SOTA Star Series IV, all not auditioned in a long time.

K

Immedia RPM-1, SME Model 20, Kuzma Stabi, VPI TNT Mk.3, VPI TNT Jr.

Tonearms

A

Eminent Technology 2.5:

$2000 with standard air pump

The ET 2 features a host of ingenious extras, including VTA adjustable during play. More important, it has "an extraordinarily live and open soundstage," according to AH, and gets the best results from a wide range of cartridges. Very fussy to set up and use, and needs a very stable subchassis turntable—VPI, for example—to give of its best. MC also reports excellent performance with the ET 2 mounted on the Roksan Xerxes. Surpassed overall by the SME V, which has as neutral a midrange and significantly better bass defini-tion and extension, and by the Air tangent. Latest version, ET-2.5, incorporates a viscous damping trough ($95) and a revised, large-diameter manifold ($400 with return of original manifold) to take advantage of the higher pressure offered by the Airtech Wisa air pump ($375) and surge tank ($200). (The Airtech pump and tank cost $500 if bought together.)

GL reports excellent results from this combination on the VPI HW-19, and also recommends the Teclock AI-911 VTA dial indicator ($34.95), for which ET provides a mounting bracket ($25). Price without standard pump is $1500. (Vol.18 No.7, Vol.13 No.3, Vol.14 No.10)

Graham Model 1.5: $2350

The "F" version costs $2750 and includes tungsten side weights ($250 as upgrade) and AZ-1 Azimuth Alignment Box ($150 as upgrade). Both versions incorporate new SW-2 arm wand ($500 as upgrade) and a refined counterweight decoupling mechanism; otherwise, the arm is the same as reviewed. Beautifully engineered unipivot design using an SME-type armboard cutout that offers interchange-

able armwands and easy adjustment of VTA, azimuth, and geometry. Superb bass definition, though not as much ultimate weight as the SME, but astonishingly good retrieval of midband information due to a very low resonant signature, exceeding even the performance of the SME in this area. Standard finishes are gold matte and chrome matte. (Vol.14 Nos.3 & 8; see also TJN's SOTA Jewel review in Vol.15 No.4.)

Linn Ekos: $2495

Clean-sounding rather than the Ittok, upon which it's loosely based, the Ekos rivals the SME in overall neutrality while offering a somewhat brighter, more energetic presentation of the music. The treble is nevertheless superbly transparent. The Ekos also proves a much better match with the Linn LP12 than the English arm, which loses control of the bass when mounted on the Scottish turntable. MC also found the Ekos's bass to be more tuneful and "open" than that of the original Ittok. Azimuth adjustment is not possible. Some users have reported long-term problems with the bearings; the sample JA bought has been okay in this respect. (Vol.12 Nos.3 & 4, Vol.13 No.3, Vol.16 No.6)

Naim ARO: $1850 $$$

"An inner balance and harmony consistent with the musical message," says MC of this unipivot design. MS found the ARO to offer superb timbral accuracy, soundstaging, dynamics, and rhythmic integrity. He also found it less bright than the Linn Ekos, and better balanced in the bass than the SME V. Additional arm tops cost $1000. (Vol.16 No.6)

SME Series V: $2250 $$$

This beautifully constructed pivoted tonearm has an extraordinarily neutral midrange, with one of the lowest resonant signatures in this region (though DO feels the Graham offers slightly more midrange detail). Easy to set up, VTA and overhang are adjustable during play, but there's no azimuth adjustment, something that DO feels to be a significant drawback. "The best bass performance on the market," said SWW—LA concurs, having auditioned the V on a VPI TNT—but JGH, JA, DO, and LL feel that the whole bass range is somewhat exaggerated. Not recommended with the LP12. Some compatibility problems with cartridges having low height. A less versatile version, the IVVi (which uses Series V bearings and Magnan Vi wiring), appears to offer the V's sonic virtues and more at a lower cost ($1995). (Vol.9 No.6, Vol.14 No.8, Vol.16 No.6)

B

SME 309: $1195

ST continues to use this detachable-headhell arm on the now discontinued AR turntable—"Beautifully engineered, easy to use, a great non-tweaker's arm," says he. Lacks any damping mechanism. (NR, but see Vol.11 No.10, p.53, and Vol.12 No.12, p.63.)

Well Tempered Arm: $995 $$$

One of the most neutral-sounding arms, according to JGH, this odd-looking arm is hard to fault on any count. Superb highs, stereo soundstaging, and midrange, plus excellent compatibility with MC car-tridges that put a lot of energy back into the arm. Some deficiency/softness in the low bass, and, according to some listeners, an undynamic sound, keep it from Class A, but virtually no other problems. Good value for money. The Black Classic version, which is
currently being supplied with new Well Tempered Turntables, is available as an upgrade for $330. Removing the armrest, which adds a thickening in the lower midrange when the arm is mounted on the Well Tempered Turntable (see Vol.11 No.6), further improves the sound, as does replacing the standard counterweight with a more massy one nearer the pivot. RH recommends the LP Lab carbon-fiber arm-tube modification for the WTA (Vol.15 No.1), which costs $395 including UPS return shipping. (Vol.8 Nos.4 & 7, Vol.9 Nos.3 & 5, Vol.16 No.4)

C
AudioQuest PT-8: $650
TJN got excellent results from the PT-8 fitted with Signet OC-9 and AudioQuest 404i-L phono cartridges on a SOTA Jewel turntable. Soundwise, the balance is a bit more forward in the midrange than the Graham arm, but with excellent dynamics. The armtube is dead, there’s no play at the pivot point, and friction seems very low, he found, summing it up as “a gem.” Otherwise identical AudioQuest PT-7 ($550) and ‘6 ($450) differ from the ‘8 only in having less highly specified AudioQuest arm-to-preamp cables. (Vol.15 No.4)

Rega RB300: $425 $$$☆
The Rega offers very good detail, depth, midrange neutrality, ambience, and precision of imaging, almost creeping into Class B. Works well with the Rega and Roksan ‘tables, but also recommended by ST as an ideal substitute for the arms that come with the AR and Sonographe ‘tables. The Audio Advisor also offers it as a package with the VPI HW-19 Mk.III and Jr. and SOTA Sapphire turntables. Lacks any form of height adjustment, however: VTA can only be adjusted by adding spacers under the base. (Vol.7 No.7, Vol.10 No.1)

K
Wheaton Triplanar IV, Kuzma Stogi.
Deletions
Oracle SME 345 not auditioned in too long a time.

Phono Cartridges

A
AudioQuest AQ 7000 NSX: $1795☆
RH’s auditioning, confirmed by RD, DAS, JE, LA, and AB, suggests a highly musical performance for this sophisticated low-output MC manufactured for AudioQuest by Scan-Tech in Japan. Superb rendering of depth, astonishing retrieval of recorded detail, and “razor-sharp” transient leading edges are coupled with a slightly emphasized top octave (that becomes sweeter after significant run-in) and a somewhat lean overall balance. DAS adds that “its detail credibility, staging, and natural warmth make you want to smash your CD player against the wall!” Auditioning by RH of the latest NSX version suggests Class A performance, RD adding that the NSX has a more neutral treble than the earlier version. (Vol.14 No.6, Vol.15 No.1)

Benz-Micro Reference: $2500
Gutsy reproduction of the lower mids and bass octaves. Non-resonant LF signature with remarkable bass punch and control; a true reference in this regard.

Exemplary retrieval of low-level detail. DO noted a slight brazen or synthetic quality through the upper octaves that traded grain for smoothness in its portrayal of harmonic textures. Price with a qualifying trade-in phono cartridge is $1750; re-tipping cost is $500. (Vol.16 No.2)

Ikeda 9R: $2495
Difficult to set up and happier at a VTF of 2.3gm, when trackability is still only adequate, the Kiwame manages to light a fire under the soundstage. Remarkable transparency, spatial resolution, and palpability coupled with a disarming liquid textural voicing, says DO. (Vol.16 No.2)

Symphonic-Line RG-8 Gold: $5000
What’s so endearing about the handmade RG-8, according to DO, is its rare mastery over music’s finesses and brawn: The effortless detailing, the smoothness of expression, and the purity of texture are combined with the bass impact and dynamic power of a steam locomotive. Works best into high-impedance loads. DO’s current reference. (Vol.16 No.2)

B
Audio-Technica ART1: $1300
Eminently musical sound with a lyrical upper midrange that DO found to sing on female voice. Excellent grip on treble transients, but less control at the bass end of the spectrum. Not as tonally convincing or as well-integrated top to bottom as the original Lyra Clavis. (Vol.16 No.2)

Ikeda 9R: $1895
The cantilever-less Ikeda offers superb transparency. Music has a fast, tight, “U-R-There” quality, felt AB: “vividly focused, delineated, and dynamic.” Less-refined treble than the Clavis and AQ 7000, however, with some sibilance emphasis. (Vol.15 No.1)

C
Kiseki Blue Goldspot: $700
This well-made MC offers good trackability, good if not outstanding image delineation, and, said DO, “outstanding bass control and definition.” (Vol.15 No.3)

Sumiko Blue Point Special: $295 $$$☆
CG enthused about this model, P-Mount-less version of the CG standard Blue Point MC, pointing to its lack of bass boaat, tonal honesty, and cleaner, more extended highs. It also offers excellent detail and focus. A touch of StyLast applied to the underside of the cantilever optimizes the bass. High output. (Vol.16 Nos.4 & 12)

D
AudioQuest MC-5: $395
Borderline Class C for this high-output MC cartridge, thought CG, who said, “Clean, crisp, and dynamic ... with a little sparkle on top.” But he thought it had less-focused soundstaging than the Blue Point Special. (Vol.16 No.5)

Benz-Micro MC-20E II: $125
A master in the bass, with excellent soundstaging, but less smooth than the standard Blue Point, with somewhat wiry highs. (Vol.16 No.4)

**Roksan Corus Black:** $325

The best moving-magnet design CG has heard, the Black is more forward-balanced and less refined overall than the Blue Point Special, but has tighter bass and better-focused soundstaging than the standard Blue Point. Fussy about VTA. Less expensive Corus Blue ($200) shares the same body but has a Gyger II-profile stylus rather than the Gyger III, and sounds more nasal. (Vol.16 No.5)

**Shure V15 Type V-MR:** $175 $$$ ¥

Very neutral midrange and bass, slightly soft high end. High compliance makes it unsuitable for use in highmass arms. You sacrifice a bit of detail compared with good MCs. A "budget reference," according to ST, who, given his druthers, would place it in Class C, though he notes that its sound "doesn't open up like a good CD." Recommended for its unsurpassed tracking ability, excellent reliability, and listenability. Excellent value. (Vol.7 Nos.5 & 8, Vol.10 No.5, Vol.12 No.11)

**Sumiko Blue Point:** $125

Rather a woolly bass, due to the P-Mount/adaptor configuration, but a sweet balance, lacking any nasality, thought CG of this high-output MC. (Vol.16 No.4)

**E**

**Grado ZTE+1:** $30 ¥

The best buy in a really cheap cartridge, this MM has excellent trackability and sounds rather like a good MC. Stereophile readers should consider spending more than $30 on a cartridge, but when asked by friends what they would recommend for an old Dual or Garrard, this "system saver" is the one to mention. Will hum if used with older AR decks (an "AR" version is available); lack of suspension damping can lead to woofer pumping, even flatter, with high- or even medium-mass arms. (Vol.7 No.8; actual review was of the earlier GTE+1.)

**K**

Roksan Shiraz, Clearaudio Signature, Benz-Micro Ruby, Sumiko Transfiguration, Lyra Parnassus and Clavis De Capo, AudioQuest MC-200, Dynavector XX-11.

**Deletions**

AudioQuest 404i-L, Audio-Technica AT-OC9, Grado Signature TLZ II and MCZ II, and Audio Advisor/Monster Cable Sigma Genesis 2000e, all not auditioned in too long a time; Koetsu Pro JV and Rosewood Signature apparently not available in the US any more; Lyra Clavis replaced by Clavis De Capo, not yet auditioned.

**Phono Accessories & Record Cleaners**

**DB Systems DBP-10 Protractor:** $30 ¥

Fiddly but accurate guide for setting cartridge tangency. JA's and JGH's preferred alignment protractor. (NR)

(NR)

**LAST Power LP Cleaner:** $30/half-oz bottle

This small bottle of Frecon-free cleaner is enough to treat 75 LPs. JE found just three drops sufficient to remove dirt, dust, and grime from garage-sale records, though he found that a subsequent wash with his VPI HW-17 was still required to reduce the level of groove noise to acceptable levels. "A worthwhile companion to LAST's wonderful Record Preservative." (Vol.17 No.5)

LAST Record Preservative: $30/2-oz bottle ¥

Significantly improves the sound of even new records, and is claimed to make them last longer. A 2-oz bottle contains 60 treatments. (Vol.5 No.3)

**Nitty Gritty Mini Pro 2 record cleaner:** $750 ¥

This semiautomatic wet cleaner cleans both disc sides at once. Slightly less rugged than the VPI '17, but both do an excellent job, and the Nitty Gritty Pro 2 is faster. Significantly better design than earlier Nitty Gritty. You may be surprised that the main sonic effect of cleaning LPs is not primarily a reduction in surface noise, but a cleaning-up of midrange sound. (Vol.8 No.1)

**Nitty Gritty 2.5Fi record cleaner:** $539 ¥

Instead of a vacuuming "tonearm," as on the professional Keith Monks machine, the NG cleaner uses a vacuum slot. Cleaning is efficient and as good as Nitty Gritty's Pro, at a significantly lower price, though it takes twice as long, cleaning each side of an LP in turn. (Vol.7 No.5, Vol.8 No.1)

**QR/DNM Design Ringmat turntable mat:** $64.95

RD found this paper/cork mat both reduced groove noise and increased detail resolution when used on his Lingo'd Linn. Some difficulties with the rings detaching, says ST, but the Ringmat turned his AR into a more detailed, more neutral-sounding 'table, he reports. Some difficulties with US delivery, reports RD. (Vol.17 No.5)

**Shun Mook Mpingo record weight:** $895

The best record weight JS has used on his Forsell turntable, "bar none." (Vol.17 No.2)

**VPI HW-17 record cleaner:** $800 ¥

Clearly an industrial-quality machine of reassuring quality, the VPI does one side at a time, semiautomatically, and is slower than the Nitty Gritty. "A highly functional and convenient luxury." Latest version has a heavier-duty vacuum system. (Vol.8 No.1)

**VPI HW-16.5 record-cleaning machine:** $450

Manually operated version of HW-17 (above), noisier motor, less money. Adjusts automatically to thickness of record. Gets hot quickly. Works well. (West Coast price is $470.) (Vol.5 Nos.7 & 9, original HW-16; Vol.17 No.5, HW-16.5)

**B**

**Gruv-Glide II:** $21.95 ¥

Record de-staticizing agent that ST found to give better sound. Apparently doesn't leave a film or grunge-up the stylus. (Vol.9 No.8)

LAST StyLast Stylus Treatment:

$25/1/4-oz bottle ¥

StyLast won't make a difference every time you put it on, but it will help provide smoother high-end sound, and is claimed to extend stylus and cantilever life. (NR)

**Nestorovic Labs Moving-Coil Cartridge Network:** $300 ¥

Passive network intended to optimally load an MC
cartridge. An "Audiophile" version is available for an extra $250. (Vol.13 No.9)

Nitty Gritty 1.5Fi Mk.II record-cleaning machine: $469
While the vacuum-cleaning Nitty Gritty does a similar job to dusty albums as the similarly priced VPI HW-16.5, CG felt that the VPI's hard-bristled brush did better with really dirty LPs than the NG's velvet one. He found the effect of both was to produce a less-colored, more detailed midband sound from LPs, as well as the expected reduction in surface noise. (Vol.17 No.5)

Nitty Gritty Model 1.0 record-cleaning machine: $239 $$
Audio Advisor Record Doctor II: $190 $$$
Both of these machines (the latter is manufactured for Audio Advisor by Nitty Gritty) are manual units that offer the least expensive way to effectively clean LPs. The Record Doctor II differs from the original in that it has a roller bearing to make turning the LP easier when the vacuum-cleaning motor is on. The earlier model can be fitted with a roller-bearing accessory—available for $16 inc. S&H from KAB Electro-Acoustics, P.O. Box 2922, Plainfield, NJ 07062-2922—which fits beneath the existing platter. The Nitty Gritty 1.0 is also available as the oak-finished 2.0 for $289. (NR)

C

Sumiko Analog Survival Kit: $50
"On a good 'table, makes kilobuck digital processors cry in their EPROMs!" was CG's verdict of this set of turntable and arm tweaks consisting of a paper-thin mat and a high-tension plastic strip to damp tonearm resonances. (NR, but see CG's Follow-Up on the WTRP in Vol.16 No.10.)

D

Decca, Hunt-EDA, Goldring, or Statibrush record brush ∆
Properly used (held with the bristles at a low angle against the approaching grooves and slowly slid off the record), these are the most effective dry record-cleaners available. (JGH disagrees, feeling that they leave the dust on the record.) No substitute for an occasional wet wash. (Vol.10 No.8)

Dishwasher record brush ∆
If you don't have a cleaning machine, the DW system will do an adequate job on relatively clean records, but won't get out the deep grunge. If you begin to accumulate lots of gunk on your stylus after cleaning your record with an older DW brush, the bristles are worn out; send it back for resurfacing, or buy a new one. A high-torque turntable is required. (NR)

K

Combak Harmonix TU-812 Tuning Record Clamp.
Deletions
AudioQuest DM-1000 cartridge demagnetizer discontinued.

CD PLAYERS
Editor's Note: The class ratings are a little different in this and the following two sections. Whereas the phrase "state of the art" can be interpreted literally for other categories, here it means the best CD sound available as of the time of writing. With every advance in digital replay, we realize that the goal still seems to be just as far away. As with computers, a CD replay system becomes effectively obsolete as you drive it home from the store. We urge caution to someone about to purchase an expensive "state-of-the-art" CD player. Perhaps the wisest strategy these days would be to buy separate transport and DAC units, each with a replaceable module, the latter being the best way to stay abreast of continuing development. (Note that the class rankings in CD players and D/A processors are not necessarily directly comparable.)

Deficiencies in the A/D converters used to master CDs may well be the limiting factor in CD sound—see RH's interview with Doug Sax in Vol.12 No.10, and compare the sound of the industry-standard Sony PCM-1630 with Chesky's 128x-oversampling ADC on the appropriate tracks on the first Stereophile Test CD.

However, even though the amount of available HCD's software is tiny—recent Reference Recordings releases and the forthcoming Neil Young back-catalog remasterings—note that the processor waters are about to be muddied by the release of products that include HCD's decoder/filter chip.

A

Accuphase DP-65: $5995
(See TJN's review in this issue.)

Linn Karik CD transport &
Linn Numerik D/A processor: $5790
Two-box system in which the DAC clocks the transport via a separate link. Current version of the Karik transport ($3395 if bought separately) incorporates a Crystal D/A section to enable it to be used as a stand-alone CD player. Though each on its own is a high Class B contender, the Karik forms a synergistic match with the Numerik to give true Class A sound.
A laid-back presentation, which MC finds off-putting, but excellent truth of timbre and improved sense of pace and timing, enthuses WP. (Vol.15 No.1; see RH's Follow-Up in this issue.)

Micromega Trio: $8000-$10,000
Very expensive three-box Bitstream player. "Superb in its ability to convey the fine dynamic structure of music," judged RH, who found that the Trio's soft, liquid presentation made him forget about reviewing and just enjoy the music. Less "punchy" presentation than the best multi-bit processors, however. Though RH ultimately prefers the Linn, MC notes that the Trio offers "superior digital replay." Now distributed by Golden String; includes both balanced and single-ended outputs. (Vol.15 No.5)

Naim NA CDS: $7000
The sound of this very expensive two-box player (unusually, it has a separate power supply rather than analog section) offers a superb sense of pace and rhythm without being overly incisive. Smooth and easy to listen to, thought RH, though ultimately he felt this didn't offset resolution of low-level detail that was not to the same standard. He preferred the same-priced Theta Data and DS Pro Generation III combination. However, as some whose ears we trust prefer it to the Linn player, we advise you to listen for yourself to see whether the CDS's balance of virtues fits your tastes. (Vol.15 No.8)

B

Recommended Components, October 1994
MSB Technology Silver: $2795

TJN declared the MSB a favorite of his, observing that this Philips-based player is ‘tube-like’ in that it combines a slightly warm, but not loose, bottom end with an immediate, ‘alive’ midrange and lower treble and a soft extreme top. No digital output, although one can be added at the expense of the player’s analog section. Includes MSB’s 32-lb “Electromagnetic and Acoustic Isolation Plate,” which is attached to the bottom of the player. (Vol.16 No.3)

Proced PCD 3: $2995

A significant price increase carries with it either a major improvement in sound quality, according to JGH, or a minor but still important improvement, according to TJN, who described the earlier, Mk.II version of the PCD as being “drier, less liquidly sweet, less pristine-sounding.” The new Proced’s sound is tight, detailed, and open, but a little “detached” (TJN) or “less involving” (JGH). TJN also felt it to be a little cooler than the MSB, overall. JGH also found it a little “closed-in” compared with the Kinergic’s ‘40 and Sony 779. (Upgrades from Series 1 and 2 players cost $1595 and $1295, respectively.) (Vol.16 Nos.3 & 6)

Sony CDP-X707ES: $2000 $$$

Actual model reviewed was the almost identical Sony CDP-X779ES, which JGH enthused about, feeling that it offered an excellent balance between hi-fi virtues and the ability to involve the listener in the music. “Detailed without being analytical, alive without being aggressive, sweet without being veiled,” he concluded. (Vol.16 No.6)

C

California Audio Labs Icon Mk.II: $895

A full-featured American player with a powerful upper bass, with excellent soundstage depth and imaging, thought J.E. Midrange a little grainer and leaner than the other Class C recommendations, but the Icon still manages to effectively communicate the music’s message. “Few players at or near its price offer as much,” summed up J.E. (Vol.15 No.7)

JVC XL-Z1050TN: $800

“Gets the midrange right,” noted CG, finding that the JVC also offered a transparent, sweet, grain-free treble, but a somewhat lightweight bass. J.T recommends this player highly for its smoothness and low-level resolution. (Vol.15 No.2)

Marantz CD-63: $399 $$$

ST’s budget reference: astonishingly detailed, smooth, clean, clear, sweet, non-fatiguing. Lacks dynamic drive, however, as well as ultimate bass extension and resolution. But “a bit special,” confirms MC. (Vol.17 Nos.1 & 8)

NAD 502: $299 $$$

The first production run of this basic deck suffered from reliability problems, due to the lack of a transit screw, but this has been fixed, we are told. “A clear, open, and unrestrained sound quality,” raved CG, with a “lively, powerful bottom end … but slightly soft on top.” “Makes life very difficult for players in the $500–$1000 range,” he concluded. Class C, agreesPWM. (Vol.17 No.4)

Pioneer Elite PD-65: $800

Less lean-sounding and more forgiving than the same-priced JVC, but also less transparent, the Pioneer with its “Legato Link” I/A conversion and upside-down platter nevertheless impressed the heck out of ST. “More dynamic, dramatic, and atmospheric [than the JVC],” enthused he. (Vol.16 No.1)

D

Radio Shack Optimus CD-3400 portable CD player: $180

Portable player with a digital output that can occasionally be found on sale for $130. Best sound is from the line-outputs with the display on, powered from good alkaline batteries. (The headphone output suffers from a tickling sound when the batteries are low.) Soft top octave, a little bit of mid-treble grain, and lightweight lows don’t detract from this unit’s overall musicality, though CG feels the $299 NAD 502 is a much better buy, overall. Sound improves with the Sequerra Power Station ($300 plus S&R—see ST’s review in this issue). (Vol.17 Nos.5, 6, 7, 9, & 10; see also “Letters,” Vol.17 No.9, pp.19–29)

Rotel RCD-955AX: $449 x

Rotel RCD-965BXLE: $600

A pair of nearly identical Japanese players designed in England that differ only in their DACs. The ‘955 uses Philips’-16-bit, 4x-oversampling chip set, the ’965 the 7323 Bistream chip. The original multi-bit ‘855 so impressed LL that he recommended it to 20 fellow members of the National Symphony Orchestra. “Great sound for a peanuts price,” was the thrust of his review’s conclusion. Very sensitive to the cables with which it’s used, though in the right context, LL felt the ‘855 to offer “a degree of transparency and harmonic neutrality usually found only with the expensive stuff.” RH agreed that the ’855 offered a musically involving sound, adding the opinion that its sins are ones of omission rather than commission. Fitted with a digital output. The current version, the ’955, differs from the ’855 only in having better cosmetics and a higher price. Both CG and MC point out that the ’955 sounds more musically natural than the Bistream ’965, due to a better-developed sense of dynamics and a more involving, if less detailed, sound. MC, however, feels that the ’965 still deserves recommendation. (Vol.13 No.7, Vol.14 No.2, RCD-855; Vol.15 No.3, RCD-955 & ’965)

K

Wada 6, Quad 67, TEAC VRDS-10, Meridian 508.

Deletions

Kinergic’s KCD-40 Platinum discontinued; Sonographe SD22 not auditioned in too long a time.

Digital Processors

Editor’s Note: The sound of any particular CD transport/digital processor combination will be dependent on the data link used.

A

Denon DA-S1: $7000

TJN liked this Japanese processor (which synthesizes information below the LSB) a lot for its midrange palpability, musically natural timbres, and overall relaxed balance. “A combination of clarity, warmth, and three-dimensionality rarely encountered at the same time in
digital playback," he enthused. MC demurs, however, feeling it to sound rather slow. (Vol.17 No.5)

Krell Reference 64: $14,000

"Powerful, rhythmic, dynamic," says MC of the top Krell processor, when used with Krell's DT-10 or MID-10 transport via the Time Sync connection. Less laid-back than the Levinson No.30, "with more immediacy, palpability, and bite," said RH, but not as forward-sounding as the Sonic Frontiers SFD-2. He added that the big Krell "excelled at presenting a cohesive, focused, and clearly delineated soundstage." (Vol.17 No.1)

Mark Levinson No.30.5: $15,950

The original No.30 was Stereophile's "Product of the Year" for 1992. The No.30.5 update, which consists of a new data receiver board incorporating an "Intelligent FIFO" memory buffer, is "a true reference quality product," says RH, and almost good enough to redefine Class A. For now, we'll give the other top-rated processors the benefit of the doubt, further comparisons being necessary. (Vol.15 No.2, Vol.16 No.6, No.30; see RH's Follow-Up in this issue.)

Mark Levinson No.35: $7950

A less sophisticated power supply and display compared with the No.30, but a sound that came close, according to TJN, that was judged to sound less liquid than the original No.30, it had a clear and immediate midrange, a translucent treble, and tight, super high extended low frequencies. (Vol.16 No.11)

Sonic Frontiers SFD-2: $4695 $$$

RH's favorite processor, offering what he felt to be true Class A performance at a very competitive price. While noting that the midrange did not sound as liquid as that of the No.30, it had "extraordinary bass reproduction ... full, rich, warm, deep, and powerful ... and a stunning sense of space," he enthused, adding that the treble was softer and cleaner. Even with the SFD-2 in balanced mode, RH found the low treble to be somewhat forward. In unbalanced mode, this sound is too bright. ST agrees: Based on his experience of using it single-ended, he found it grainy and lacking in tonal beauty. JS also reinforces RH's finding that the SFD-2 must be listened to using its balanced outputs. Although the output impedance is not particularly high in the midrange, it rises to 3k at 20Hz, meaning that, unless the preamp used has a high input impedance, the sound will be too lean. The SFD-2 also produces higher levels of distortion into loads below 7500 ohms. (Vol.16 No.12, Vol.17 No.1; see also the Timbre review in Vol.17 No.4.)

Digital Domain VSP Model S: $1495

Intended as a sample-rate converter, this slim unit also re-clocks digital data and virtually eliminates jitter. The sonic result is to render digital sound much closer to analog, JA found. Some, however, are concerned that it rewrites each data word. Six digital inputs and four outputs, all on AES/EBU, ST, coaxial, and TosLink. (NR, but see "Industry Update," Vol.17 No.1, p.39; RH is currently working on a full review.)

B

Altis Audio DSP-5t: $3950

Quite dynamic, overall, for a Bitstream unit, decided ST, with excellent clarity and a smooth, sweet midrange. Output stage uses tubes, but soundstage depth a little limited, in absolute terms. (Vol.17 No.1)

Meridian 563: $1395 $$$

With a bass that's weighty, extended, and controlled, an open-sounding, spacious soundstage, and a smooth, liquid-sounding midrange, the 563 is "the best-sounding processor in its class," according to RH. Not as much bass slam as the Sonic Frontiers SFD-2 and some slight mid- and treble grain keep this inexpensive unit with a jitter-rejecting dual-PDLL receiver from scaling Class A heights. (Vol.17 No.4)

Proceed PDP 3: $2945

With better resolution than its predecessor, a much better sense of reproduced space and depth, and a smoother, more liquid overall presentation, the new version of the PDP is a significant step forward. Fuller LF than the original UltraLink, but a little more hazy in the treble. (Upgrades from Series 1 and 2 cost $1495 and $1395, respectively.) (Vol.16 No.5)

PS Audio Reference Link: $4795

A full-function, remote-control digital control unit, with balanced and single-ended outputs, that's intended to be the power amplifier direct. Includes an excellent A/D converter for analog sources (though no input level control is provided), and features the UltraAnalog DAC-20 D/A converter, which includes a digital-domain volume control. RH felt the overall sound to be somewhat better than the PS UltraLink, in that it was more vivid, more incisive, with better detail resolution and soundstaging. Highly recommended, agrees MC, nominating it for a borderline Class A rating, though he points out that using the Reference Link with an external preamplifier leads to a significant drop in sound quality. (Vol.16 No.10)

Timbre Technology TT-1: $3295

Good-sounding, says RH, but expensive for sound quality offered. Roughly comparable to the Meridian 563, but with better free space constraint and tighter image focus—"stunning," he said in the review—and a much nicer chassis. A well-balanced performer, though JS, with a smoother, darker balance than the Sonic Frontiers SFD-2, with powerful low frequencies. Balanced version costs $3895; adding balanced outputs and an AES/EBU input to an existing TT-1 costs $800. Unbalanced, buffered outputs have a very high level. (Vol.17 No.4)

C

Adcom GDA-600: $750 $$$

Offering a smooth treble and excellent bass, detail, dynamics, and soundstaging, the inexpensive Adcom would be rated borderline Class B, were it not for a trace of hardness in the mids, says RH. "Lacks refinement," says ST, who nevertheless recommends it highly, adding that it is "a bargain." LL couldn't believe how good it sounds... a remarkable value. (Vol.17 No.3)

Audio Alchemy Digital Transmission Interface: $259 $$$

Not a D/A processor, but a data re-clocking device that goes between the transport and D/A and reduces measured word-clock jitter. Strips out the subcode, says MC, which always improves the sound. Whether the DTI will improve the sound of a system depends on the spectrum of the jitter and whether the transport's jitter is lower or higher than that of the DTI. Pre-purchase auditioning with specific transport and converter is therefore mandatory. Ideal
for use with digital sources—laserdisc players, for example, that have only TosLink optical outputs. (Vol.16 No.5; see also Vol.16 No.1, p.143, & p.47; and Rémy Fourné’s article on jitter in Vol.16 No.10.)

**Counterpoint DA-10: $1695 plus DAC card**
Well-made mainframe processor that accepts interchangeable DAC cards. The AD1862 DAC card costs $255, offers excellent sense of pace, a grain-free treble, a transparent soundstage, and is the best value. The UltraAnalog card costs $995 and has the sweetest sound, according to MC; RH found the bass to be too warm and full, however. The Crystal 1-bit card sounds smooth and easy on the ear, but lacks immediacy and pace. It costs $355. There’s also a Burr-Brown card at $595, but this wasn’t auditioned. AES/EBU and AT&T connectors each cost $200. Current production features new, low-jitter data receiver module—$395 as upgrade—that JA feels sweetens the sound considerably. (Vol.17 No.2)

**McCormack Digital Drive DAC-1: $995 $$$**
Well-made 1-bit DAC using high-quality parts and the Crystal chip set. Soundstage sounds open with good clarity, and more immediacy and less top-octave energy than the Meridian 263, but shares the British processor’s laid-back dynamics. (Vol.16 No.11)

**Meridian 263 D/S: $895 $$$**
Unique double-PLL data-input receiver circuit reduces word-clock jitter to very low levels. The sound of this delta-sigma, Crystal-based processor may not suit all listeners, points out RH. The 263’s bass is less powerful and tightly defined than that of the Cobalt, and the overall presentation is less transparent and softer in the treble than the original Sumo Theorem. Very musical overall balance, however, and its absence of treble hash lifts the 263 into Class C. (Vol.16 No.6)

**Micromega Duo BS: $975 $$$**
Needs to be used with a good transport, notes MC of this French Bitstream processor—something that was confirmed by ST, who got excellent results with a Melior CD-D. “Sweetness, smoothness, and delicacy... free from edgy, irritating sound,” was ST’s description of the Duo’s character. (Vol.15 No.6)

**D**

**Audio Alchemy DAC-in-the-Box: $259 $$$**
Sets a new standard for sonic performance per dollar. “Avoids the worst faults of inexpensive digital,” said RH. Excellent articulation in the bass, with excellent soundstaging but slightly grainy treble. Borderline Class C, says CG, held back by its weak low end and slightly wiry highs. Perfect for upgrading the sound from laserdisc in a high-end Home Theater, or for getting high-end sound from a mass-market CD player (provided it has a digital output). Benefits from use with a bigger Audio Alchemy power supply and a DTI or better jitter-reduction box, found JA. (Vol.17 No.3)

**Cobalt 307: $599**
“Punchy, clean, clear,” says ST. “A big, gutsy, powerful quality” says RH, though a little “thick-sounding overall. Less lean than the original Sumo Theorem, but doesn’t have as focused imaging or as deep a soundstage. Borderline Class C, according to RH; the best under-$1000 processor CG has heard. (Vol.16 No.4)

**K**


**Deletions**
Kinergetics KCD-55 Ultra and KCD-55p, California Audio Labs System 1 now too expensive for sound quality offered; Theta DS Pro Basic II replaced by Pro Basic III, not yet auditioned; PS Audio Digital Link II discontinued.

**CD Transports**

**A**

C.E.C. TL 1: $4950 $$$$  
Unusual, beautifully constructed belt-drive transport with a more laid-back, easeful sound than the Levinson No.31, and less forceful in the bass. Sounds sweet and extraordinarily musical, however, with a lush midrange. (Vol.16 No.7, Vol.17 No.5; sec also RH’s response to a reader’s letter in Vol.16 No.9, p.25.)

**Denon DP-S1: $8000**
Though MC found it a bit laid-back in the pace’n’rhythm department, TJN was very impressed by this Japanese transport. Using both Denon’s own DA-S1 processor and the Mark Levinson No.35, he felt it had a warmer, fuller balance than the Levinson No.31, similar to that of the C.E.C. (Vol.17 No.5)

**ESoteric/TEAC P-2S CD transport: $7000**
The latest version of one of the first “CD superdecks” gave a wide, deep soundstage with “scads of detail” and a deep, controlled bass when it was used with JS’s Timbre DAC. He felt the AES/EBU connection to get the best from the Esoteric. (Vol.13 No.12, Vol.14 No.4, P-2; Vol.17 No.5, P-25)

**Forsell Air Bearing CD transport: $6900**
With this “upside-down” Swedish transport, the user places the CD on the turntable and lowers the laser pickup assembly onto it. The result, according to JS, is a true Class A sound, especially using its coaxial data output. The lows were extended and tight, the highs airy and open, the soundstage gigantic and unbound- ed; “palp factor” was the highest JS had experienced in his system. (Vol.17 No.5)

**Mark Levinson No.31: $8495**
Astonishingly well-constructed transport offers spectacular presentation of recorded detail and superbly extended, well-defined low frequencies, summed up RH. JA found that, while the 31 is the natural partner to the Levinson No.30, it also gets the best from inexpensive processors such as the Meridian 263 and even the Audio Alchemy DITB. (Vol.16 No.6; see also RH’s response to a reader’s letter in Vol.16 No.9, p.25.)

**B**

**Meridian 500: $1795 $$$**
This British transport’s bass was not as tight as that of the Theta Data Basic, found RH, but its treble was smoother. MC adds that he finds it not as good as the discontinued Meridian 200 when it comes to pace.

**Recommended Components, October 1994**
But it formed a musically synergistic combination with the excellent Meridian 563 processor, striking just the right balance between immediacy and ease. (Vol.17 No.4)

Museatex Melior CD-D: $1749 $$$
ST heard a firming up in the bass, lower distortion and hash, and increased resolution of detail, air, and ambience with this nicely finished transport fitted with a coaxial data output. RH confirms that high Class B is the appropriate rating. (Vol.15 No.6)

Nakamichi 1000mb: $6000
Stunningly finished transport is expensive, but you’re paying for the Japanese company’s “Music Bank” seven-CD changer mechanism. CD drawer door provides acoustic seal against external airborne vibration. Sound driving the Theta Generation III or PS Audio UltraLink is mellower than the Theta Data’s, RH found, with a general sense of ease. AT&T ST optical output adds $850. (Vol.15 No.6)

Proced PDT 3: $2495 Ξ
Cosmetically identical to the Proced CD player, the PDT offers optical (ST), balanced electrical (XLR), and unbalanced electrical (RCA) data outputs. Compared with the Esoteric P-2, the earlier PDT 2 offered a more forward treble and fatter and deeper low frequencies, but a less-well-defined bass performance overall. Latest PDT 3 significantly improves on the PDT 2’s performance, and has slightly better cosmetics and excellent damping feet. (Upgrades from Series 1 and 2 cost $1295 and $1095, respectively.) (Vol.14 No.5, Vol.16 No.5)

PS Audio Lambda CD transport: $1795 $$$
“Tremendous punch and dynamics,” decided RH, though less liquid-sounding than the C.E.C. “Well-balanced, a fine value,” adds MC. “A workhorse,” according to SS. Price includes AES/EBU and coaxial outputs; AT&T ST output adds $300 to price. (Vol.16 No.10)

Theta Data Series II: $2495
Modified laser disc player which impressed RH, MC, CG, and LL. AT&T ST optical output adds $400 to price, but must be regarded as mandatory. (Though CG says that if you have an early Data, the money is better spent on upgrading to the Series II: “Coax Series II sounds better than optical Series I.”) JE felt the Data to be the best transport he’d heard in his system before the No.31, while RH stated that it “redefines what we can expect from a CD transport.” RH’s Data occasionally found a disc it wouldn’t play, while LL’s original Data developed a susceptibility to shock, which appeared to be a sample fault. Now features optional Single-Mode Laser Link for an extra $800 (see RH’s and CG’s WCES reports in Vol.16 No.4). (Vol.14 No.11, Vol.15 No.10)

Theta Data Basic: $1750 $$$
Similar in many ways to the PS Audio Lambda, the Theta has powerful bass, a little more clarity, but less-forward, smoother highs. Excellent tracking ability. A superb value. ST-optical output adds $300; single-mode output adds $800. (Vol.17 No.3)

D

JVC XL-Z1050TN: $800
We have found this JVC CD player to make a good transport from its coaxial data output, even though that output is taken before JVC’s proprietary K2 Interface jitter-reduction circuit. (Vol.15 No.2)

Pioneer PD-65: $800
“Makes a superb transport,” notes ST, who likes the Pioneer CD player’s ergonomics. (Vol.16 No.1)

Radio Shack Optimus CD-3400: $180
Cheapest data-reading device available, though wide tolerance on data clock timing will give trouble locking with processors like the dual-PLL Meridian 563. Sound without a DTI or similar jitter-reduction device is a little “whitened” in the treble, with reduced soundstage depth, a “fuzzy” bass, and a lack of pace, said JA. (Vol.17 Nos.5, 6, 7, & 9)

K

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CD-PLAYER ACCESSORIES

AudioPrism CD Stoplight: $14.95 Ξ
Green water-based acrylic paint for coating the edges of CDs. The green color—it absorbs the laser’s infrared wavelength—is presumably significant, but at present we have no idea why this tweak should so improve the sound of CDs. That it does so, however, seems to be beyond doubt to anyone with ears to hear (though no one single product has raised greater guffaws from the mainstream press). “This stuff works!” report JE, PVW, and JA, who feels that it increases soundstage definition, improves the solidity of bass reproduction, and usefully lowers the level of treble grain so typical of CD sound. PVW and MC report that a water-based poster pen, the Uniposca from Mitsubishi, has a very similar effect. MC also notes that the CD should first be destaticized and its edges degraded before the green paint is applied. (Vol.14 No.11; see also DO’s and TJN’s WCES reports in Vol.13 No.3, and ST’s and RH’s articles on CD tweaks in Vol.13 No.5.)

AudioQuest LaserGuide: $20
“If you’re into glossing up your CDs, this is the best stuff I’ve come across,” says CG. (With all CD treatments, take care not to scratch the surface.) (NR)

CD Greenbacks: $1.98 each & $1.50 S&H for first 5, $2 for up to 10
Green plastic disc that sits atop a CD’s label side; JE called it “the real steal of the digital age.” Improves the music’s microdynamics, with a lowering of the apparent noise floor; also rescues discs that have too many errors to play without dropouts. (Vol.16 No.2)

CD Saver Ξ
Eliminates scratches from CDs and laserdiscs, rendering the unplayable playable. Dishwasher and Radio Shack market similar products. (Vol.10 No.8, Vol.11 No.8, Vol.14 No.11; see also Vol.13 No.9, p.11.)

Compact Dynamics CD Upgrade: $15.70/ten, $49.95/fifty

C

Editor’s Note: There are currently no Class C CD transports.
Self-adhesive polyester disc, with centering system, that is stuck to the CD's label side to produce subjective improvements similar to those from CD Stoplight and CD Greenbacks. Note that the disc is not removable. (Vol.16 No.2)

Discwasher CDL2 CD Laser Lens Cleaner: $21.95
PvW found this CD fitted with six tiny brushes in a spiral to be effective at improving the sound of his 18-month-old Marantz CD-80. (Vol.14 No.11)

FInyl CD treatment: $11.95 (treats 100 CDs)
This surface treatment made CDs sound more "open, direct, and dynamic," determined PvW. A larger bottle ($23.95) treats 200 CDs. (With all CD treatments, take care not to scratch the playing surface.) (Vol.14 No.11)

ASM Labs Spatial Filter: $45
Basically an optical aperture disc that fits over the laser lens in a CD player—it comes in nine different sizes—resulting in lower measured jitter in the recovered data stream. Both RH and CG found that the improvement in sound quality was offset by the player becoming much more fussy about which disc it would read. Fitted as standard in the PS Audio Lambda and Theta Data Basic transports. Originally called the "Laser Illusions" Spatial Filter. (Vol.15 No.6)

Sumiko Reference Band: $17.95/dozen ¥
Molded, non-adhesive Navcom band that fits around the periphery of a CD to produce the same aural benefit as CD Stoplight, including an increase in the amount of reproduced reverberation and improved bass quality. Similar Allsop product appears to work as well. (Vol.14 No.11; see also ST's column in Vol.13 No.9)

Taddeo Digital Antidote line-level CD filter: $170
A passive analog box that fits between a CD player's output and the preamplifier. Rolls off the highs and adds a slight phase lead in the top octave; JE found a significant improvement in soundstaging palpability, however. The manufacturer's claims that the Antidote performs time-domain and jitter correction were found to be exaggerated, however. (Vol.16 No.9)

Theta Optique: $50
Refractive-index-matching goop which LL recommends for use with ST-type glass-fiber datalinks.
"Must be used on the Theta's internal connections to get the full benefit," he advises. (See LL's Theta review in Vol.15 No.10.)

PREAMPLIFIERS

Editor's Note: Apart from the Jadises, YBA, Air Tight, and CAT, all the Class A preamplifiers offer both balanced and unbalanced outputs.

A

Air Tight ATC-2: $5400
(See DO's review in this issue.)

Audio Research LS5 Mk.II: $4995
The Mk.II version of the all-balanced, all-vacuum-tube preamp (not yet reviewed, but auditioned by RH) is smoother and quieter than the original LS5, and the earlier version's one Achilles' heel—a trace of treble hardness—is alleviated. Warmer- and richer-sounding than the hybrid LS2B. Needs to be used with the Audio Research BL2 single-ended to balanced converter ($1495) in order to be used with unbalanced sources, which is awkward, adds significantly to price, and drops the sound quality to high Class B. (Vol.17 No.8, Mk.II)

Audio Research LS2B Mk.II: $2995 ¥
"The most transparent yet—love it" said MC of the unbalanced version of this line-level-only preamp, which RH also found to have almost no editorializing effect on the signals it passes. DO demurs, however, feeling that the FET/tube '2 was bettered by the Jadis JPL in that the tube preamp threw a more palpable, better-defined stage. Current version has balanced inputs and outputs; an upgrade is available for owners of the original LS2 for $695. (Vol.14 No.10, Vol.16 Nos.1 & 4)

Audio Research LS3/LS3B: $1695/$1995 $$$
A line-level-only all-FET preamplifier, the '3 offers Class A quality at an affordable price—"impossible but true!" enthuses MC, who prefers it to the hybrid LS2B. "You could not ask for more at twice the price!" Superbly spacious soundstaging and punchy dynamics are coupled with excellent transparency and a very neutral midrange. The "B" balanced upgrade for a plain LS3 costs $695. (Vol.16 No.8)

Cello Palette Preamplifier: $6500
As well as superb transparency across the band and holographic imaging, the Palette Preamplifier offered "a musical quality I didn't know existed," according to LL, though JE is less convinced. Extremely high input impedance, but only 6dB of gain. Incorporates superb graphic equalizer which differs from the norm in having a large amount of interaction between the bands. In combination with the fact that the maximum amount of boost and cut decreases toward the center of the audioband, this actually results in very fast optimization of program material by ear. Note that the response with the controls centered but not bypassed is not quite flat, which will invalidate listening comparisons to pin down the sound of the EQ circuitry on its own. Optional phono stage costs an additional $2000. (Vol.15 No.6)

Convergent Audio Technology SL-1 Signature: $4950
JE's reference, the tubed CAT is both harmonically accurate and able to endow the music with "glorious midrange splendor." JS finds the CAT to be vividly balanced and ruthlessly revealing; RN demurs, feeling the CAT to obscure information. Both JE and JS enthuse that it excels in the reproduction of dynamics and of a palpably real stage. Phono stage is quiet enough to work with the AudioQuest 7000NSX. "Magic," summed up Mr. E, "still the one to beat when price is taken into consideration." "A great preamp," adds R.D. Stereophile's 1993 "Product of the Year." (Vol.15 No.12, Vol.17 Nos.1 & 9)

Jadis JP-80MC: $13,990
While it refuses to play the expressionistic "Van Gogh" trap that so many tube preamps fall into, the Jadis's combination of tonal neutrality, velvety harmonic textures—"lush," agreed JS—extraordinary timbral accuracy, and astounding microdynamics lead DO to strongly maintain that it, above all else, is the premier full-function preamp of the decade. A gateway to sonic heaven, says DO. (Vol.17 No.9)

Jadis JPL: $5395
The tubed Jadis offers timbral accuracy and consummately defined soundstaging, and sets a new standard in the delineation of dynamic contrasts. Fleshes-out the full spectrum of shadings from soft to very loud with the greatest of ease, says D.O. MC would like greater transparency, however. (Vol.16 No.1)

**Krell KRC:** $6900

Ll gives the ergonomics of this remote-controlled preamplifier, MC the "confident, clean deep bass," TJN the combination of instrumental weight and body, clarity, and openness. He also enthused about the open-sounding, graceful highs, marginally preferring balanced operation. TJN's reference for (lack of) preamplifier sound. Phono stage adds $500, but is of high Class B quality compared with the line stage's Class A, thought TJN. (Vol.17 Nos.1 & 3)

**Mark Levinson No.38S:** $6495

Borderline Class B for the standard No.38 ($3995), which RH feels is not resulting enough for Class A. While agreeing with RH that the '38 has a laid-back nature, JA enjoys its ergonomics—including the best-thought-out remote volume-control—and its lack of treble aggression/grain. Preliminary auditioning of the more expensive No.38S suggests that it's a true Class A performer. (Vol.17 No.8, No.38)

**MFA MC Reference:** $12,850

The preamplifier to replace the CAT Signature in JE's reference system, this immaculately engineered tube preamplifier combines an "uncanny" sense of spaciousness with superb retrieval of low-level detail and an excellent sense of pace. A more powerful bass than the CAT, but a more distant soundstage perspective overall. High phono-stage gain and low noise optimize its use with low-output MCs. Inverts polarity from inputs to outputs. "Joyously musical and tirelessly entertaining," summed up JE in his review. (Vol.17 No.1)

**YBA 2 preamplifier:** $2750

With its MC transformer module ($600), this ultra-quiet French preamp gave the best sound from vinyl JA had experienced in his system since he retired his Audio Research SP-10. The line stage is merely good. While it has great clarity, a liquid-sounding midrange, and excellent low-frequency weight and definition, it sounds a bit lean, overall, and has less image depth than, for example, the Classé Six. Both line and phono stages invert polarity, meaning that what will be an optimum setup for LP playback will require an additional polarity inverter for CDs. (Vol.17 No.7)

**B**

**Classe Six Mk.II:** $3295

Borderline Class A, with a very dynamic sound, a tight, well-defined bass, lots of pace, but a somewhat forward midrange and a darker, less open presentation than the original Mark Levinson No.26, felt LG. Offers balanced and unbalanced outputs and one set of balanced inputs. Line-stage-only version costs $2995; a remote control costs $300. (Vol.17 No.2)

**Coda Technologies FET-01:** $2750

"Superb detail, very smooth, lacks dynamics when compared with the best preamps, avoids any hint of hardness or sibilant splash, a fine performer at the price," said ST of this beautifully built FET preamp. "Cool, calm, and collected," was how RD described the Coda's sonic personality, noting that its bass was more extended and more controlled than that of either the SP9 or PV11. He also found the Coda to lack any trace of hardness. Line-level-only version costs $2450. (Vol.15 No.3)

**Counterpoint SA-5000:** $3595

Superb transparency, coupled with a slightly forward presentation and a taut, robust bass. A slight reduction in soundstage "air" and depth and a somewhat bright presentation keep this versatile, well-made, all-tube preamplifier from scaling Class A heights, however. "Worth the extra bucks over the SA-3000," said GL. Separate (tube) power supply. Note that the inverted position of the polarity switch slightly increases the gain, which will invalidate any "Absolute Phase" listening tests. High output impedance from better-sounding "direct" outputs mandates care in system setup. (Vol.15 No.3)

**Exposure XVII preamplifier:** $1495 $$$

This modest-looking British preamplifier "has a fundamental musical righteousness," felt RH, who also found it to have "a rhythmically powerful, tight, and coherent sound." Only a touch of hardness in the mids and treble keep it from Class A status. The MC phono stage is very quiet, and, while a bit laid-back in overall balance, was one of the best-sounding RH has used. Recommended to those of whose lives LP playback remains an important part. (Vol.17 No.4)

**Krell KRC-2:** $3700

Remote-control, solid-state line-level preamp offers a similar mix of balanced and unbalanced outputs to its big brother, the KRC. Requires significant break-in, found MC, but then offers a good combination of midrange neutrality, treble purity, and wide, deep soundstaging, losing out to the KRC in midrange dynamics and low-frequency "grunt." Sounds more open set to its higher gain mode. FET input switches overload much above 5V RMS, meaning care will need to be taken with CD processors from Kinergetics, Theta, and Timbre. (Vol.17 No.6)

**McCormack Line Drive TLC-1:** $995 $$$

This modest control center's buffered FET outputs are unity gain or less, meaning that it will be unsuitable for use with insensitive amplifiers or with components that have a very low output. With a typical CD source, however, it offers superb transparency, very low noise, and an almost undetectable sonic signature. Ultimately, however, its balance is a little lightweight and lacking in dynamics, which might make it worth checking out the external power supply ($295). Passive outputs sound even more transparent, but only in the context of an appropriately matched system. (Vol.17 No.7)

**Melos SHA-1 headphone amplifier:** $1095 $$$

"Class A," according to CG, who prefers it to the LS2B; "borderline Class A," according to JA; both use this modest FET/tube device primarily as a line stage. Excellent soundstaging, a neutral, "utterly transparent" (says CG) midband, and powerful, driving low frequencies are only offset by a slightly dark overall presentation with a touch of upper-midband brightness (says JA). Price is for silver finish; black front panel adds $100; now has three (unbalanced) inputs. (Vol.15 No.10)

**Perfectionist Audio Components**

**CPR IIIB/TIPS line stage:** $3100

Class B for the battery-powered line stage, RD judged, due to a lack of editorializing, a wide soundstage, and excellent presentation of detail. But Class C
for the optional phono module. AC-powered line stage costs $1550; AC-powered line stage with MM stage costs $1950; AC-powered line stage with MC stage costs $2350; TIPS rechargeable battery supply on its own costs $1550. (Vol.15 No.10)

Sonic Frontiers SFL-1: $1395 $$$

“This Canadian line-level preamplifier kicks butt!” exclaims DO, noting that it competes effectively with units costing much more. A hybrid tube/FET design from the pen of Joe Curcio, it features lavish selection of passive parts and careful attention paid to power supplies. Dynamics and spatial resolution are strong suits, though its reproduction of harmonic textures is strongly affected by choice of 12AT7A tube. DO found Chinese tubes to sound bright and grainy, the best tube being the Yugoslavian Tesla (Gold Aero) now supplied as standard, which had the smoothest-sounding treble. Review sample had high output impedance. Current production has improved midrange clarity and treble smoothness compared with earlier version due to changes in wiring and board layout, as well as a reduced output impedance. GL enthusiastically agrees with DO’s characterization of the SFL-1 as “a giant-killer.” (Vol.15 No.8, Vol.16 No.2)

C

B&K Sonata Pro 10MC: $698 $$$

Inexpensive preamp with one of the best MC stages ST has heard—“neutral, detailed, never spitty or splashy.” Line stage not quite as good, but can be switched out of circuit. (You needed to switch off the power amps when you did this with early Sonatas, but current production is okay in this respect.) Price includes balanced outputs. (Vol.14 No.5)

Conrad-Johnson PVi0A: $1195

All-tube, full-function preamplifier that CG found very appealing, particularly for LP playback. Balance is on the warm side, but there’s a palatable sense of musicians being in the room that adds to the listener’s enjoyment of the music. Version without the phono stage costs $995. (Vol.16 No.6)

D

Editor’s Note: There are currently no Class D preamplifiers recommended.

K


Deletions

Atma-Sphere MP-1 (see SS’s Follow-Up in this issue); Jeff Rowland Design Group Consummate discontinued, to be replaced by new Coherence; Mark Levinson No.26 & 26S equalized by less expensive No.38 and No.38S; Mark Levinson No.28 now too expensive for sound quality; Krell KSL-2 and Counterpoint SA-3000 & SA-2000 not auditioned in too long a time.

Passive Control Units

Editor’s Note: While many audiophiles feel that a passive control unit has the potential for offering the highest possible sound quality from line-level sources such as CD, it must be noted that the entire responsibility for driving the interconnects, the passive unit, and the power amplifier input is handed over to the source component, which may not be up to the task. Careful auditioning will be essential in putting together a musically satisfying system around a passive unit.

A

Electronic Visionary Systems Attenuators:

$230-$450

RH enthused over the transparency offered by these passive control units, sold by mail-order only. The dual-mono Ultimate Attenuators, which plug either into the power amplifier’s input sockets or a CD player’s output sockets, cost $230/pair with 12-position unbalanced attenuator, $305/pair with 24-position unbalanced attenuator, and $450/pair with 24-position attenuator. Those primarily interested in CD replay should investigate these well-made units. (Vol.13 No.7)

McCormack Line Drive TLC-1: $995 (External power supply adds $295)

Although the McCormack does have buffered active outputs, its passive outputs are the most transparent JA has heard, if a little laid-back in absolute terms. Highly recommended, he says. (Vol.17 No.7)

B

Purest Sound Systems Model 500: $315

RN feels its Bourns pot to lose a little transparency, but confirms that this inexpensive, dual-mono, four-input device “will get you most of the way there as far as a control center is concerned.” “A humdinger,” says ST. “It’s basic, it’s simple, the parts quality is high ... everything else messes up the sound of my Meridian 508 by comparison ... I use it in my main system.” Very similar Model 1000 ($435) adds more inputs and is more versatile. (Vol.17 No.8)

Moving-Coil Step-up Devices/Phono Preamp

A

Expressive Technologies SU-1 transformer: $3500

A 35-lb step-up transformer that offers “utter transparency” and “exquisite resolution,” according to RH. JA agrees, finding his LP sound with the SU-1 feeding the Mod Squad Phono Drive’s MM input to be deliciously transparent and musical. Unless used with Expressive Technology’s own interconnects, however, it may be impossible to avoid excessive hum pickup. Needs also to see a 47k ohm load impedance with low capacitance. Otherwise, the sound quality will be overly dependent on the preamp’s MM-input characteristics. (Vol.15 No.7)

Mark Levinson No.25: $3990

Available in High- or Low-Gain versions, this MC-line-level phono preamp features identical circuitry to the phono section of the No.26. Above price includes PLS-226 power supply. Price without, for those who want to power it from their No.26 power supply, is $2495. Needs careful positioning to avoid hum being induced into its circuitry from the power supplies of other components. (NR)
American Hybrid Technologies phono preamplifier: $2500

Very quiet solid-state MC-line-level RIAA equalizer/preamplifier with separate power supply. Can be set up for optimal gain/impedance match with the user's MC phono cartridge. JS was impressed with the unit's transparency, neutrality, and pace, though he decided to keep his CAT Signature overall. (Vol.16 No.12)

Audio Research PH1: $1495

"Remarkable in its sense of focus, delineation of individual instruments within the soundstage, and transparency," said RH of this phono preamplifier/RIAA equalizer. He did point out a somewhat lean, too incisive balance that keeps this unit from Class A performance overall. Requires careful system matching. (Vol.15 No.11)

Krell KPE: $850 $$$

Borderline Class A, says MC of this add-on phono preamplifier/equalizer for the Krell KRC-2, offering "a precise, tightly focused soundstage, an unusually fine dynamic range, and crisp, expressive, and spacious sound." Can only be powered by the KRC-2's DC outputs. (Vol.17 No.6)

Sonic Frontiers SFP-1: $1095 $$$

Tubed unit with what RH called "a delicious midrange bloom," a complete lack of grain, etch, and hardness, and stunning soundstaging, particularly in its MM mode. (MC mode adds a class-A FET gain stage ahead of the tube circuitry.) First review sample had a shelved-down treble due to an out-of-spec RIAA stage capacitor. The second sample had a flat RIAA response which ameliorated RH's earlier criticisms of an "airy soft sound" and a lack of "airy immediacy, and detail." "A terrific bargain," was his final verdict. Borderline Class A. (Vol.16 Nos.9 & 10)

K

Audio Research PH2, FM Acoustics FM-222, Rotel RHQ-10, Sonic Frontiers SFP-1 Signature.

Deletions

Vendetta Research SCP-2C phono preamplifier no longer available.

Power Amplifiers

Editor's Note: Due to the disparity between typical tube and solid-state "sounds," we have split Class A into two sub-classes. Nevertheless, even within each sub-class, Class A amplifiers differ sufficiently in character that each will shine in an appropriate system. Careful auditioning with the user's own loudspeakers is therefore essential. Note that, except where stated, all output powers are specified into an 8 ohm resistive load.

A (Tube)

Air Tight ATM-2: $6995

An 80Wpc classic stereo tube design from Japan that eschews the use of printed circuit boards in favor of point-to-point wiring. "The most refined [push-pull] tube amplifier money can buy . . . a magical midrange," according to DO. Though its highs are free from grain or hash, the Air Tight does have a rather shut-in high treble when compared, for example, with the Audio Research Classic 60, a point which bothered ST. "Sounds like a more refined Quicksilver," said RH. Its low bass, too, is less well defined than the other Class A amplifiers, and it really needs to be used with speakers having 8 ohm impedances. As of 10/93, DO lays problems at the frequency extremes squarely at the feet of the original Chinese KT88 tube complement. "No longer a refined Quicksilver," he reports after his experience with the Gold Aero KT99A: "The extreme treble opens up, harmonic overtones are even more liquid, and the deep bass tightens up considerably." Note that the KT99A requires at least a 20-hour break-in. (Vol.13 No.5, Vol.16 No.10)

Air Tight ATM-3 monoblock: $10,500/pair

This Japanese amplifier's midrange is pure and liquid in the classic tradition, with full-bodied lower mids and the speed and spatial precision audiophiles have come to expect from modern tube designs. Reproduction of dynamic and rhythmic shadings is outstanding, even with difficult loads such as Sound-Lab A-1s. The best-sounding ultralinear output stage DO has heard to date—he prefers the sweeter sound of the original KT77 to that of the stock EL34s. Note that the KT77 does not work in triode mode, drastically curtailing distortion-free power delivery. With EL34s, the triode mode carries the midrange performance a notch forward, sounding a bit more sweet and suave, but sacrifices about half the available power: 60W to 135W. (Vol.16 Nos.6 & 10)

Audion Silver Night 300B monoblock:

$3900/pair

"A beautiful, refined sound, a super, sweet midrange, and rather good bass, too, for a 20Wpc tube job," feels ST of the original push-pull, 300B amplifier. "Not at all flabby," has a little more je ne sais quoi, "truth of timbre," he says, than the Cary CAD 300B. (Vol.17 Nos.2 & 6)

Audio Research VT150 monoblock:

$11,900/pair

The finest yet from ARC, this 130Wpc power amplifier is smooth, liquid-sounding, and grain-free, with an accuracy of timbre and a level of detail that RH found "astonishing." While it doesn't have the punch of a Class A solid-state amplifier like the Krell KSA-300S, RH felt the VT150 to give a more palpable impression of there being an acoustic double-bass in his listening room, with a greater sense of openness, bloom, and space in the lower registers. "Sets the standard in liquidity, soundstaging, and sheer musicality. Deep, layered, and very transparent soundstage—truly transcendental," is how he sums up his feelings, just in case you misunderstood. "Magnificent, big-hearted, truly Class A Plus," enthuses MC. Output impedance from the 4 ohm taps is a low 0.3 ohms, minimizing any response interaction with the speaker loads. (Vol.17 No.8)

Bel Canto Design Orfeo SE2 monoblock:

$7590/pair

Exquisitely sweet and refined mids coupled with a slightly laid-back perspective are this single-ended tube amp's most compelling sonic traits, says DO. Unusually for an SE amp, no excuses need be made at the frequency extremes. Its sound is spatially impressive, yet it lacks the dramatic vividness of, say, the Cary 805. The output is limited to about 25 clean watts, which dictates its use with a speaker of at least a 90dB/W/m sensitivity and a benign impedance. Svetek 12AX7WXT dual input triodes are now supplied as standard. (Vol.17 No.7)
Cary Audio Design CAD-805 monoblock:
$7995/pair
A classic single-ended design, the 805 squeezes some 30 clean watts out of a single 211 power triode driven by a 300B. There are weaknesses at the frequency extremes, but the real glory of this amp is its reproduction of the core of the musical message. Midrange textures are vivid, and the sense of space and time is so believable “you’ll embrace instrumental outlines with outstretched arms,” opines DO, who feels that this return to “our audio roots” has redefined for him what high-end audio should be all about. Used full-range, the 805 requires a loudspeaker with a benign impedance magnitude and at least a 90dB/W/m sensitivity. (Vol.17 Nos.1 & 2)

Cary Audio Design 300SE monoblock:
$3695/pair
“These are the magic Carys!” exclaimed ST. “They have a way of making the music come alive that I have not heard from any other amplifier... Palpable presence in spades!” Bass, while not in Krell territory, is still tight and tuneful. However, at just 12W power output, it will be very hard to find a matching loudspeaker. (Vol.16 No.11)

Conrad-Johnson Premier Eleven: $3295 $$$
Though this beautifully made 70Wpc tube amplifier failed to light ST’s fire—despite its “pleasant” sound, he preferred the McIntosh MC275 and the Sonic Frontiers SF5-80—MC feels that, while its strengths may be subtle, the Eleven should not be underestimated. “True Class A,” MC decided, an opinion reinforced by WP, who sums up its sound as “warm, articulate, true to the music.” (Vol.17 Nos.2 & 10)

Fourier Sans Pareil OTL Mk.III monoblock:
$2950/pair plus freight
Available only directly from the manufacturer, this audiophile-grade reworking of the NYAL Futtermann OTL-3 requires careful load matching, preferably with high-end-impedance speakers, its measured output power of 160W falling off rapidly below 8 ohms. Surprisingly strong bass for an OTL design, while DO noted, “...in concert with all great tube amps, it breathes life and drama into the midrange.” And the soundstaging? With the amplifier driving Sound-Lab A-1s, this literally had DO dancing for joy in his listening room. To a larger extent than any amplifier in this listing, the Fourier will demand a special relationship with its owner. The current version features improved front-end and power-supply circuitry, and screen regulation; DO reports that it sounds purer than the original. (Vol.15 No.6; see also “Letters” in Vol.15 Nos.8 & 9)

Jadis JA 200 monoblock: $18,990/pair
A superb tube amplifier, offering an honest 130W that, according to DO, outdistances its competition primarily in the area of soundstaging, where it unfolds a panoramic and rock-solid spatial impression of the original recording venue. Although harmonic textures are fluid in the best tube tradition, DO obtained the sweetest mids by substituting good EL34s (Gold Aero E34Ls) for the stock 6550s; JS likes Tungsol 6550s, but with N.O.S. AEG 802S input tubes to displace the Gold National 12AU7s. This amp does not sound romantic, cautions DO, who finds that the lack of flash through the lower mids argues for a matting with a warm-sounding front end. Although DO tried various line conditioners, JS found the Jadises to give of their best when plugged straight into dedicated wall outlets. Read his Follow-Up for the full tweaking route. (Vol.16 No.11, Vol.17 No.3; see also JS’s review of the Timbre TT-1 in Vol.17 No.4.)

Jadis Defy-7 Mk.II: $6995 ☹️
Super dynamics, says ST, perhaps at the expense of Jadis’s traditional subtlety. MC adds that this physically massive, 100Wpc stereo tube amplifier has the ability to drive awkward loads to high levels, with authoritative bass reproduction. “Musically, it has a heart of gold,” he enthused, adding that its sound is superbly coherent, grainless, and detailed. (Vol.14 No.9, Vol.16 No.4)

Music Reference RM-9 Mk.II: $2950 $$$
(Vol.12 No.12; see DO’s Follow-Up in this issue.)

Vacuum Tube Logic MB 225t monoblock:
$4990/pair ☹️
RH’s long-term reference amplifier; in its EL34–fitted form, he feels it has a detailed and unfatiguing presentation, a harmonic rightness, and an unparalleled midrange liquidity: “There is something magical... in the mids that is unmatched by any other amplifier I’ve auditioned.” CG, however, prefers the version with VTLS own KT90 output tubes (see Vol.14 No.6, pp.128–142 & 289–299) for its “more kick-butt balance and tighter bass.” Maximum power output is around 190W. Available in tetrode (EL34) or triode (KT90/6550) versions. (Vol.13 No.1, Vol.14 No.10)

Valve Amplification Company PA90C1 monoblock: $6990/pair
“its holographic imaging ability in triode mode is astonishing,” DO reports on the sound of this superbly made two-box tube monoblock. “Its levels of transparency, spatial resolution, and dynamic shading combine for a much more convincing illusion of live music.” ST, too, was impressed by the sound of these amplifiers: “…[S]uch midrange, such detail...a realism that was positively breathtaking,” he gushed, though he felt it only fair to point out a lack of overall dynamics. ST agrees with DO that triode mode is the way to go, noting also that the almost unobtainable KT77 output tube gets the best from the amp. Output power is 45W triode, 90W ultralinear. An earlier version was reviewed; auditioning of current samples confirms the rating. (Vol.14 Nos.9 & 11)

A (Solid-State)
Krell KSA-300S: $9500
The finest-sounding Krell yet, this 330Wpc powerhouse runs significantly cooler than previous Krell amplifiers, due to its “Sustained Plateau Biasing.” Sounding less lean than the KSA-250 and more palatably real in the midrange, the ’300S offered grainless, three-dimensional reproduction, with a well-focused soundstage and a silky treble, noted TJN. (Vol.17 No.1)

Krell KSA-200S: $7500
Although it has a very similar, powerful presentation to the larger ’300S, the 200Wpc ’200S, which shares the “Sustained Plateau Biasing” output topology, is a little more laid-back overall. Very good transparency, however, with excellent image focus and natural depth perspectives, noted MC, adding that it sounded more musically natural than the earlier KSA-250. LG enthusiastically agrees with the Class A ranking.
**Mark Levinson No.20.6 monoblock:**  
$15,950/pair  
LL would like a little more power, but agrees with JA that the hot-running 100W No.20.6 offers a big improvement over its predecessor. The sound preserves the No.20.5’s effortless dynamics and stunning bass impact and extension, and couples them with a significantly more transparent midrange and airier high frequencies. Whereas the No.20.5 lost on points to the newer No.23.5, the No.20.6 sets a new standard, in JA’s opinion. Type II upgrade from No.20.5 costs $2390/pair plus $560/pair for new faceplates; upgrade from older amplifiers below SN 1850 costs $3290/pair. (Vol.12 No.9, No.20.5; Vol.15 No.4)

**Mark Levinson No.23.5:** $7495  
A significant redesign of the original No.23 has resulted in an amplifier that sounds altogether more musical, according to JA (though LL feels it’s too laid-back for his tastes). Compared with the No.20.5s, the 300Wpc No.23.5 offers a more vivid, dynamic, better-defined view into the image, though it still doesn’t approach the standard set by the Audio Research Classic 60 in this respect. Its soundstage is also a little shallower than that thrown by the Krell KSA-250, but it handily outperforms even that beast when it comes to low-frequency extension and weight. It’s at its best with darker-sounding loudspeakers. (Vol.14 No.9)

**Mark Levinson No.275:** $5495  
Now sold with RCA connectors, the 100Wpc No.275 offers improved dynamic contrasts, great transparency, punchy lows, and clear highs compared with its predecessor, concluded LG. Like its No.23.5 stablemate, soundstage depth is a little curtailed compared with the best in this respect. (Vol.16 No.7)

**Symphonic-Line Model RG-7:** $5600  
“The only solid-state amp I would live with,” proclaims DO of this well-made 150Wpc German design. “Musically refined, wonderfully transparent and detailed without even a hint of edginess and aggression.” He adds, however, that its presentation is on the dry side compared with the best tube models. (Vol.15 No.2)

**YBA 2 HC:** $3750 $$$  
Well-engineered, slim-line 110Wpc dual-mono amplifier from France features short signal paths, high parts quality, and “a superlubly transparent view into the soundstage,” found JA. Low sounds a little soft in absolute terms, but well-defined, combined with an excellent sense of pace. Overall, a musically natural presentation—ultra fidèle. (Vol.17 No.1)

**B Aragon 4004 Mk.II:** $1850 $$$  
This well-made 200Wpc solid-state amplifier provided TN with what he thought was the best low-end control of the Apogee Stages he has yet heard in the Stereophile listening room. Sounding less forward than the Threshold S/550e, the 4004 is overall not quite up to Class B’s highest performers in high-frequency purity. Nevertheless, TN notes that he prefers it to the similarly priced McCormack, which, by comparison, has a somewhat softened treble focus. CG also enthuses over the 4004: “This is a KILLER amp and one of the best values in high-end audio, period... my favorite affordable muscle amp.” (Vol.15 No.9; see also TN’s Hafer review in Vol.16 No.4)

**Berning EA-2101:** $3900  
Unusual 140Wpc tube amp featuring switch-mode power supply and versatile swapping choices of output transformer secondaries. Capable of conveying an intensely musical experience, provided care is taken over system matching. An undercurrent of bright harmonic textures can easily be exacerbated by typical solid-state edginess. Excellent midband transparency, noted DO. Prefers highish-impedance speakers, due to increase in HF distortion and intermodulation into more demanding loads leading to sonic “witness.” (Vol.15 No.10)

**Boulder 500AE:** $4650  
DAS feels this well-made, 150Wpc solid-state stereo amp, based on the late Deane Jensen’s discrete op-amp topology, is “the most natural-sounding amp I’ve used,” though he points out that, to get the best from it, you need to use it with a preamp lacking dryness. LL, SS, and JGH would all argue for a Class A rating for the 500AE, JGH feeling the Boulder to be the most accurate amplifier he’s heard. While “...there was nothing reticent about the top,” the highs being “smooth but not sweet,” he found the Boulder’s presentation of midrange detail “was nothing short of remarkable... Highly recommended!” Says LL: “Some will claim that it sounds too vivid, too forward, but I think it sounds so much more real than I thought possible.” Though he agrees with JGH that the 500AE has superbly powerful, well-defined, and extended bass, RH does find its overall sound too vivid and forward. So JA decided that high Class B/borderline Class A is about right. LL, DAS, and JGH found the 500AE’s sound to be significantly improved, in that it becomes smoother and less dry when a pair are used as bridged monoblocks. XLR sockets are wired opposite to IEC/AES recommendation with pin 3 hot, leading to inverted polarity. Optional handles are $325. The otherwise identical Boulder 500 adds meters and other ancillaries and costs $5800. (Vol.9 No.5, Vol.14 No.10, Vol.15 No.4)

**Bryston 7B NRB monoblock:** $4390/pair  
Borderline Class A for this very powerful (500W in series mode, 156W in high-current parallel mode) solid-state amplifier from Canada, felt TN. A rather full, warm low end is allied to a very neutral midrange and sweet, clear highs. RD prefers the big Brystons to the Krell KSA-100S. THX-approved version costs $2345 each. (Vol.16 No.10)

**Bryston 4B NRB:** $2095 $$$  
The revision of the highly regarded 250Wpc 4B improves on an area that was very good to start with: bass, where it equals the Krell KSA-250. The 4B NRB displays generous amounts of bass 'slam' and "snap," notes LG, but falls short of the Krell's rich midrange and ultra-smooth highs. THX-approved version costs $2245. (Vol.15 No.5, Vol.16 No.1)

**Cary Audio Design CAD 300B:** $3295  
Classic 300B sound from this push-pull amplifier: a smooth, sweet midrange, with triode purity. ST found the bass to be surprisingly tight, tuneful, and well-defined. Lowish power—30Wpc—means the matching loudspeakers must be relatively sensitive. (Vol.16 No.11)

**Coda 2.5:** $2350 $$$  
"The antithesis of mechanical sound" is how DO labeled the baby Coda's rendition of harmonic textures. In addition to its pure harmonic palate, the
25Wpc 2.5 excelled in conveying the pace of the music, whether it be jazz or classical. One of a handful of solid-state designs that blurs the dividing line between tubes and transistors. DO summed up thusly: "a genuine sweetheart of an amp." (Vol.17 No.5)

**Crown Macro Reference: $3995**

This very powerful (760Wpc) solid-state stereo amplifier has Sterophile's reviewers and readers divided. Sounding rather dry overall, with a thin treble, the Crown's lean balance will lead to care having to be taken in system matching. A "clean, clean, quick" character, according to ST, who stands by his recommendation. DO found it to work quite well with Sound-Lab A-1s. PWM adds that the Crown does "an amazing job of causing mid-level dynamic loudspeakers to sound more musical, involving, and three-dimensional than they have a right to." LL, however, found it to be the least musical-sounding amplifier he had ever heard, in that it lacked harmonic accuracy and dynamic shading, JA was also not impressed. RN summed it up best: "The real question is, can the Crown Macro Reference survive the zealotry of its followers?" (See "Letters," Vol.17 No.2, pp.15–25, and No.4, pp.11–13.) Fans can be noisy. (Vol.15 No.12, Vol.16 No.11)

**Forte 4A: $17900 $$$**

An amp that sounds really great, decided CG, adding that it goes much louder, with greater authority, than any 50W solid-state amplifier has a right to. He also praised the sweet, but vividly detailed, high frequencies and terrific pitch definition in the bass. Added RH: "A remarkable absence of grain and glare." (Vol.15 No.11, Vol.16 No.7)

**Krell KSA-1005S: $5300**

While MC and RD feel the 100Wpc Krell not to be as dynamic or as detailed-sounding as the larger S-series amplifiers, RD did comment on its rounded, natural midrange quality. "Bland," choruses ST. JA also felt the '100S's bass to somewhat lack the traditional Krell strength of slam and extension, but comments on its sweet midband and forgiving highs.

Borderline Class A for an amplifier whose performance will probably be more system-dependent than is usually the case with a Krell design. (Vol.17 No.9)

**McCormack Power Drive DNA-1: $1995 $$$**

Beautifully made with premium parts, this relatively inexpensive amplifier had RH waxing lyrical about its sound: "... warm, sweet, punchy, and eminently musical." With a more laid-back, less dry balance than the Boulder 500AE, the DNA's soundstage presentation featured a superb sense of palpability, noted both RH and JA. A pair wired for bridged mono operation costs $4595. "A strong Class B product that is knocking on the door of Class A."—RH. (Vol.15 No.4)

**McIntosh MC275 Commemorative Edition: $3995**

A well-made reissue of a classic 75Wpc tube amplifier, with a forward balance and very dynamic sound—"punches out the music"—and excellent overall clarity. Bass is a "bit wild and out of control," said ST. (Vol.16 No.11)

**Meridian 605 monoblock: $3500/pair**

Excellent sense of pace, notes MC of this 150Wpc solid-state design. ST says there's a liquid-sounding, tube-ish midrange, though it's perhaps not as fully developed a sense of space as he would like. (Vol.15 No.12)

Nestorovic NA-1: $7200/pair

In his original review, SWW said that this 150W tube monoblock, driven in balanced mode, came close to combining the best of solid-state performance with the best of tubes, sounding euphonic, but with a tight, well-controlled bass. DO listened to more recent samples and felt that, although they were not as detailed or as transparent as transistors, he had a midrange that sounded sweet, and worked to perfection in complementing Nestorovic's own loudspeakers. Borderline Class A performance, overall. (Vol.9 No.8, Vol.14 No.9)

**Parasound HCA-2200 II: $1750**

This reworking of an initially disappointing 250Wpc design from John Curl succeeds in spades, offering "Class B sound at a Class C price," according to SS. While its treble is a little on the tizzy side and not as grainless as that of the Boulder, and the midrange is not as liquid as the VTL 300's, the big Parasound offers an otherwise neutral sound, with great authority and a prodigious, effortless bass. (Vol.17 No.3)

**Sonic Frontiers SFS-80: $2895**

Well-thought-out 80Wpc tube design with much use made of premium parts. JE said it sounded typically tubey, slightly softened on top, but with a warm, rich midrange character. He also felt its soundstage depth was slightly foreshortened. While KK prefers the McIntosh MC275, ST thought the SFS-80 has great bass for a tube amp, but lacks ultimate resolution. He found it worked much better with Czech Tesla EL34s than with Serbian KT99s from Gold Aero. "A good, solid performer." (Vol.16 No.4, Vol.17 No.2)

**Sonic Frontiers SFM-160 monoblock: $5495/pair**

"Classic tube sound on steroids," is how DO characterized the sound of this high-powered (160W) tube amp—but only when configured with Sovtek 6922s in the front end, which Sonic Frontiers confirms is now standard in production. WP agrees that the sound with the earlier standard 6L6/8s is uninvolving. A rare blend of brawn and finesse: lots of "palpable" tube watts coupled with warm, liquid, and sweet harmonic textures. Very high output impedance requires care in speaker matching. (Vol.17 No.6)

**Woodside MA50 mono block: $4495/pair**

A spacious, three-dimensional sound, a well-focused soundstage, a rich midrange, and an open-sounding treble, but more neutral-/cool-sounding than the butterfly character of classic tube amplifiers, notes LG of this British 45W tube design, descended from the classic '60s designs by the late Arthur Radford. He recommends it for use with Quad electrostatics. (Vol.17 No.6)

**B (Integrated Amplifiers)**

**Acurus AIA 100 "Direct-Input Amplifier": $995 $$$**

Combining a passive preamp section with a solid-state 125Wpc power stage, CG says the DIA 100 is "the best $1000 you can possibly spend on a power amplifier/line-stage combination." Its basic character is "gutsy and upfront, with a bright, forward character and a butt-kickin' low end," according to CG. While the Acurus can handle difficult loads like the Thiel CS3.6, JA found it to sound a little lean overall, with a slightly grainy mid-treble—"Chalky," said CG—
which will mean careful system matching. But, at the price, superb value for money. "Recommended U-Bet!" summed up CG. (Vol.16 No.11)

**Arcam Delta 290: $899 inc. remote $$$**

It was this British amplifier’s phono stage that first caught CG’s attention: when he sent his Modulus 3 preamp back to the factory to be updated, he didn’t miss it. The Arcam "allowed the music’s natural flow of rhythmic excitement to groove freely out of the speakers, quoth he, commenting on its open, clean midrange and treble. Though he felt the Delta 290’s bass was good rather than great, "A hell of a fine piece, with a really nice MM/MC phono stage to boot," he summed up. Optional MC/MM phono board costs 99. (Vol.17 No.7)

**Exposure XV: $1295 $$$**

Modestly-powered (40Wpc) English integrated amplifier with unusual regulated power supplies for its output stages. Got a thumbs-up from RH for its excellent sense of dynamics and soundstaging, its smooth, natural midrange quality, relatively grain-free treble, and good sense of bass weight—all provided the amplifier wasn’t asked to work too near the edge of its power envelope. (Vol.16 No.2)

**C**

**Muse Model 100: $1350**

This modestly priced stereo MOSFET amplifier was one of the “finds” of 1991, offering a coherent, musically satisfying presentation. CG commented on its effortless sense of dynamics; while its bass wasn’t in the same class as that of the Adcom 555 II, its midrange and highs were better-balanced overall. TJN also found the sound of the 100Wpc Muse to his liking when driving B&W 801s (see Vol.14 No.6, p.200). Balanced inputs add $100. (Vol.14 No.4)

**Nobis Cantabile: $1695**

This reworking of the Dynaco Stereo 70, with discrete FET input and driver stages, offers 35Wpc, reasonably good bass, and superb midrange transparency. “Price a little high for the watts,” decided CG, but “a very musical, capable, thoroughly modern Millie of a tube amp.” High output impedance will give a sound that’s more dependent than usual on the loudspeaker with which the Nobis is used. (Vol.15 No.9)

**PS Audio 100 Delta: $1295**

Main sonic characteristics of this 120Wpc solid-state design are a somewhat softened bass and slightly closed-in high frequencies, thought TJN. He liked the excellent midrange presentation, however, with its “clear, naturally rich immediacy.” Good value for money. (Vol.15 No.9)

**Rotel RB-980BX: $600 $$$**

Excellent value for money, this modestly priced 120Wpc amp was designed in England but is made in the Far East. Kind to difficult loads, said MC. TJN noted a slight grain or crispness to the highs, some midbias leanness, and a somewhat soft low end, but these were offset by a lively overall presentation and an excellent sense of soundstage depth. (Vol.15 No.11)

**C (Integrated Amplifiers)**

**AMC CVT-3030: $900 $$$**

“Attempts to do for tubes what the venerable NAD 3020 did for solid-state,” said JE of this 30Wpc amplifier with MOSFET preamp circuits and a modular tube output stage. With sonic errors mainly of omission, the ‘3030 largely achieves that goal, only really falling short in its shallow reproduction of soundstage depth. “A great buy at the price,” summed up JE. Note that the response is not flat with the tone controls engaged and set to their center positions. (Vol.16 No.6)

**Audiolab 8000A: $849**

Well-made British 75Wpc amplifier, with a full-bodied, clean sound, a clean midrange, and a quick, clean, detailed bass. In absolute terms, the Audiolab sounds perhaps a bit too clean for its own good; CG preferred the more vivid presentations of the Acurus DIA-100 and the Arcam Delta 290. Still, “no major shortcomings,” he concluded. JA feels the Audiolab to be an amp for all reasons—it will disappoint no one to whom you recommend it. (Vol.9 No.1, Vol.12 No.9, Vol.17 No.7)

**NAD 304: $379 $$$**

The bass may lack a little slam, but "The spirit of the 3020 returned," according to CG, who nominates the inexpensive 35Wpc NAD as one of his favorite components! “Every civilian who’s steered toward the 304 instead of a cheap receiver is a planted seedling for the High End,” he cries. An excellent MM phono stage. (Vol.17 No.4)

**D (Separates)**

**NAD 2400THX: $649**

“Gutsy and weighty,” said TJN of this powerful (100Wpc continuous, 370Wpc short-term) design. Though the lower treble is a little forward, the overall sound never comes to life in the way that it should with a Class C component, he concluded, but a natural choice for a highend dynamic-range Home Theater system. (Vol.15 No.11)

**D (Integrated Amplifiers)**

**Creek 4240: $595**

“Smooth, too smooth,” decided CG about this modestly powered (35Wpc), laid-back—sounding British design, feeling that the less-expensive NAD 304, with its more detailed phono stage, outpoints it. WP disagrees, feeling that there’s definitely a place for a product that favors a balanced presentation over extension at the frequency extremes—he’d buy a Creek for his mom! Phono boards cost $95 MC, $50 MM. (Vol.17 No.7)

**K**

B&K ST-1400, Muse 160, Naim NAP250, Electrocompaniet AW-100, VTL 140 Deluxe monoblock, McCormack DNA-1 monoblock, Classe Fifteen, Classé M700 monoblock, Ensemble Corifeo, Pass Labs Aleph Null, Arcam Alpha 5 integrated amplifier.

**Deletions**

Parasound HCA-800 II, Audio Research Classic 60 and Classic 120 monoblock, Naim NAP 140, Ensemble B-50 Tiger Deluxe, Adcom GFA-555 II, Sumo Androneda II, and Vacuum Tube Logic Tiny Triode monoblock—all not auditioned in too long a time to be confident of rating; Halter TransNova 9300 & 9500 no longer manufactured; ConradJohnson Evolution 2000 discontinued.
LOUDSPEAKER SYSTEMS

Editor’s Note: Class A “Loudspeakers” are sufficiently idiosyncratic and differ enough from one another that prospective customers should read Stereophile’s original reviews in their entirety for descriptions of the sound. I have therefore just listed every system or combination that at least one of Stereophile’s reviewers feels, as a result of his experience, to approach the current state of the art in loudspeaker design. (Note that, to be eligible for inclusion in Class A, the system must be full-range—ie, feature bass extension to 20Hz. They must also be capable of reaching realistic sound-pressure levels without any feeling of strain.)

For those unconcerned about the last few hertz of low-bass extension, we have created “Class A (Restricted Extreme LF)” for those speakers that are actually state-of-the-art in every other way. Candidates for inclusion in this class must reach down to at least 40Hz, below the lowest notes of the four-string double-bass and bass guitar.

In addition, such has been the recent progress in loudspeaker design at a more affordable level that we have an extra class: E, for “Entry-Level.” Someone asked me recently why Stereophile bothers to review inexpensive loudspeakers at all. In effect, aren’t we insulting our readership by recommending that they buy any of these inexpensive models? Remember: It’s possible to put together a musically satisfying, truly high-end system around any of our Class D and E recommendations. That’s why they’re listed—and why you should consider buying them.

A
B&W Matrix 800: $15,000s/n$18,000/pair ☆ (Vol.14 Nos.6 & 10)
Meridian D6000: $16,000/pair ☆ Active system offers digital data inputs only and uses Bistream D/A conversion. (Vol.14 Nos.9 & 10)
ProAc Response Four: $18,000/pair
ProAc Response Four: $18,000/pair (Vol.17 Nos.3, 5, & 6)
Sound-Lab A-1: $13,250/pair
“Wings” to reinforce the lows are $1450/set of four in oak, $1750/set of four in walnut; “SALLIE” backwave attenuators are $895/pair. (Vol.15 No.11)
Thiel CS5i: $12,300/pair ☆
LA’s auditioning of the new “i” woofers suggests that the original’s one weakness—limited bass dynamic range—has been eliminated. (Vol.13 No.6, Vol.14 No.10)

A—Restricted Extreme LF
B&W John Bowers Silver Signature: $8000/pair (stands included) Expensive two-way minimonitor with outboard crossover uses silver throughput and successfully pulls off the trick of persuading its listeners that it’s much bigger than it really is—at least at moderate spls. Useful bass exists down to 32Hz, with a delightful combination of weight and articulation. The uncolored presentation is astonishingly transparent, soundstaging is superbly palpable, and tonal balance is a little on the polite side, but the Silver Signature is, overall, the most musical-sounding design to come from B&W that JA has heard. (Vol.17 No.6)
Dunlavy Audio Labs SC-IV: $4995/pair in American Oak (black or golden) $$ $5495/pair in dalwood rose or dalwood teak

“This is a fabulous speaker... but misses full Class A ranking by a handful of hertz,” says RD of this large, three-way, time-coherent design. The soundstaging is precisely defined; the level of coloration is non-existent; the sensitivity is high; the impedance is a true 4 ohms; dynamics (both macro- and micro-) were superb; RD bought the review pair! (Vol.17 No.4)

MACH 1 Acoustics DM-10 Signature: $10,995/pair
Superb driver integration combined with an exceptionally inert cabinet make for remarkable clarity and resolution. This, together with a knack for revealing music’s rhythmic nuances, empowers the MACH 1 to fly at the speed of sound as few dynamic speakers can. Reproduction of the upper registers is distinguished by the use of the Accuton ceramic tweeter; an unusually sweet-sounding tweeter which earned high praise from DO. Optional spiked, non-resonant platforms add $250/pair. (Vol.17 No.1; see also Martin Colloms’s comments in “Letters,” Vol.17 No.4.)

Sonus Faber Extrema: $12,500/pair (stands necessary)
“I admire the commitment, dedication, and craftsmanship which have gone into this effortlessly musical transducer,” says MC of this well-constructed two-way speaker from Italy. MC emphasizes that the Extrema, with its remarkable sense of timing, superbly transparent, spacious treble, and naturally generous midrange, would be rated in Stereophile’s Class A were it not for a low-frequency response that doesn’t quite reach 20Hz. “Always musical,” says KK. LG agrees with both writers, saying that “The Extrema has it all: speed, transparency, imaging accuracy, and midrange richness.” Unusually, the crossover does not use capacitors, and tuning of the rear-panel A/B is adjustable to optimize the low frequencies for the owner’s room. Matching stands cost $1500/pair, but should be regarded as essential to get the best from this gem by designer Franco Serblin. ($89650/pair)

Sonus Faber Guarneri Homage: $9000/pair (stands included)
The moving-coil speaker MC has found to sound closest to the Quad ESL-63, this handmade, limited-edition Italian miniature was reputedly designed by ear. Nevertheless, its response is flat, its balance neutral and, in MC’s words, the Guarneri is all about “purity, unmistakable sense of liveness, scale and sense of presence of real sounds in the listening space... time and time again, the reproduction had the ring of truth.” The standard 39” stands are a little too tall for use in small rooms; custom heights can be ordered. (Vol.17 No.7)

Sound-Lab A-3: $9650/pair ☆
JGH’s reference speaker for more than seven years, offering excellent dynamic range and a neutral, transparent midband that reproduces instrumental timbres as convincingly as Gordon has encountered, JGH and PWM feel it qualifies for Class A in sound quality, though this large electrostatic’s ultimate lack of extension without a subwoofer precludes that lofty ranking. “Wings” to extend the bass response can be retrofit for $1250-$1550, depending on finish. (Vol.9 No.6, Vol.11 Nos.6 & 11, Vol.15 No.1)

B
Editor’s Note: I make no apologies for the wide
variety of loudspeakers listed in the next two groups. Polling Stereophile's reviewers resulted in a total lack of consensus, implying that all of the following speakers will, in the right room with the right ancillaries, give true high-end sound. Following pressure from JGH that small speakers should automatically be denied any recommendation because of their lack of LF extension, I have split Classes B and C into two sections: "Full-range" and "Restricted LF." To be included in the latter class, a small speaker has to be at least as good in every other area as the full-range competition. (Note that all the full-range Class B recommendations, with the exception of the Apogee Stage, B&W 801, and Spendor $100, are floorstanding models.)

B—Full-range

**Acarian Alón IV:** $3500/pair

With a bass response that was as tight as it was deep, a "huge" soundstage, and excellent dynamics, the three-way Alón IV impressed the heck out of RD. Some residual upper-midrange brightness can be alleviated by careful system and room matching. A slight nasality could be occasionally bothersome, added TJN. Needs to be tri-wired for best performance. A rosewood finish adds $900/pair. (Vol.16 Nos.2 & 12)

**Apogee Stage:** $2995/pair $$$ • (stands optional)

**Apogee Mini Grand:** $5595/pair

The Stage, now with a styling matching the grand Apogee Grand, has one of the most neutral, seamless midbands around. Recorded voice is reproduced with an uncannily lifelike quality. Imaging, too, is superb—"In terms of soundstage transparency, it rivals any loudspeaker money can buy," says DO—as is the speaker's presentation of recorded dynamics. There's a lack of deep-bass extension, but the midbass is actually very generous, which both upsets LA and leads to matching problems in some rooms. Prospective purchasers should be prepared to experiment with room position and toe-in to get the optimal sound. Matching stands ($695/pair) are also available for those who prefer a "higher listening seat." "A real honey ... an eminently musical transducer," said MC. *Stereophile* aged sufficiently with that conclusion to buy the review pair. With the dedicated Mini Grand subwoofer and DAX crossover ($2595/pair), the combination knocks on the door of Class A: "a big-sounding, top-class three-way—what a bass wallop!" cries MC. (Vol.13 No.8, Vol.14 Nos.2, 3, & 10, Vol.15 No.4, Vol.17 No.3)

**Audio Physic Tempo:** $2995/pair

Easy-to-drive two-way from Germany that impressed *Stereophile's* listening panel. Excellent dynamics, very good bass extension, transparent soundstaging, good image focus, uncritical, vertical listening axis, a smooth overall balance, and clean highs are offset by a slightly lean lower midrange and too-forward upper midrange. RD is working on a review of a matching DSP equalizer. (Vol.17 No.8)

**Avalon Eclipse:** $5900/pair •

A warm balance, a flat on-axis response, astonishing midrange transparency, beautifully delineated, almost holographic soundstaging, and a relative freedom from coloration combine to generally allow the music to communicate most effectively. However, this is only true when the Eclipses are driven by good tube amplifiers, the sound with even good solid-state amplification—Mark Levinson, Jeff Rowland—being too bright. The Eclipses also have somewhat limited dynamics, which can lead to hardness at very high playback levels. Price refers to a Nextel finish; a non-rain-forest veneer finish adds $1700/pair. Current production has "an inexpensive tweeter revision," which AB felt to significantly improve the sound; earlier samples are upgradeable. (Vol.14 Nos.1 & 10, Vol.15 No.8)

**B&W Matrix 801 Series 3:** $5500/pair • (stands optional)

A complete redesign of the classical recording industry's standard monitor loudspeaker—aluminum-dome tweeter and B&W's patented "Matrix" enclosure, whereby the cabinet is effectively transformed into a solid body—has resulted in a moving-coil speaker capable of competing with the best planars. As LI put it, "a true musician's reference transducer." Strengths include excellent low-frequency definition and weight, a highly detailed midrange, and restrained dynamics. B&W's bass-alignment equalizer gives true 20Hz extension, but is not included in the purchase price. The best sound, however, is to be had from one of the after-market models, such as those from Anodyne and Denver dealer Listen-Up (the MaughanBox). Best used with stands: We've had good results with the Sound Anchors and with the wooden, sand-filled Arcisis. (Also see Vol.12 No.10, p.45, and Vol.13 No.2, p.217, for discussions of a crossover modification that improves the sound of the original 801 Matrix.) Current version has a revised tweeter, a non-detachable head, an improved crossover layout, and has done away with the APOC protection circuitry. (Vol.10 No.9)

**Energy Veritas v2.8:** $6000/pair

This tall, "hi-tech"—looking three-way/four-driver design from Canada uses a dome midrange unit and has a flat midrange/treble response, impressive dynamics, and an almost textbook horizontal dispersion. Borderline Class A sound and imaging are the result. However, the bass is balanced to be rather generous in all but very large rooms, found TJN. "The mids and highs are exceptionally articulate, balanced, and accurate," adds WP. The v2.8 can be tri-wired or tri-amped; some owners recommend reducing the midrange level by wiring a 1 ohm, 10W resistor in series with the "box" terminal. (Vol.17 No.6)

**JPW Ruby 4:** $2895/pair

Well-finished two-and-a-half-way design from Britain that uses metal-diaphragm drive-units. Excellent transparency and well-focused soundstaging are allied to tight but light low frequencies, a very clean midrange, a sweet-sounding lower treble, and fast, open, and alive highs. Can sound a little too sibilant, however, and dynamic range is relatively restricted. (Vol.17 No.8)

**Martin-Logan Quest Z:** $3995/pair

Martin-Logan's most successful and intensely musical hybrid to date, according to DO, blending a world-class electrostatic midrange with good dynamic bass. Soundstage transparency and reproduction of image size are superb. As with all hybrids, the optimum tonal balance requires a fairly close listening seat. Even so, there are some residual tonal-balance deviations from neutrality. The upper bass is on the lean side of reality, while the lower treble is overly polite. Even though the mids benefit from the imaging magic of tubes, the best deep-bass definition is to be...
had with solid-state amplification. The Z version (said to be sonically identical to the older Quest) offers a more benign impedance. (Vol.16 No.10)

**Martin-Logan Aerials: $1995/pair $$$**

Once broken-in, this hybrid speaker offers superb integration between electrostatic panel and dynamic woofer and a very good LF extension for what is basically a small speaker. In terms of speed, truth of timbre, absence of coloration, and reasonably good imaging and stage focusing, ST feels the Aerial is hard to beat, though he would like more highs, in absolute terms. MC points to a rather ragged on-axis response, but JA states that, within the restriction of its necessarily limited dynamic range (which will rule out its use in large rooms), the Aerial is the best speaker yet to come from M-L. "It’s the exceptional balance of its strengths that makes it such a satisfying component," agrees WP. Oak side panels and bi-wiring each add $100/pair to the price. (Vol.16 Nos.6 & 10)

**Mirage M-1si: $5500/pair**

Large bipolar design from Canada with a smooth yet precisely detailed sound. A large, spacious soundstage—both in width and depth—a clean, low-coloration midrange, and silky, detailed highs, according to TJN. Bass is deep and extended, though it leans toward warmth; at its best with solid-state amplifiers having tight low-frequency control. Capable of first-rate sound in Home Theater applications. (Vol.16 Nos.6 & 10)

**Mirage M-3si: $2800/pair $$$**

"An unqualified success," said GL of this unusual, floorstanding bipolar design, "... which, in the right system, can re-create a musical experience with all the richness, finesse, power, and majesty [of] a full-range speaker." flattest response is to be found on the woofer axis (52° from the ground), though the full-bodied bass might be too much in some systems or rooms. (Vol.15 No.11)

**NHT 3.3: $4200/pair**

Unusual four-way dynamic speaker, deep but narrow, goes against the front wall to optimally load the woofer but still get minimonitor-like imaging precision. TJN was impressed with the NHT’s sound, commenting on its extended, powerful, well-defined bass, the sweet, delicate high frequencies, and well-focused soundstage. He found the latter expanse than with some other speakers, however, the imaging restricted to the space between the speakers. "I’d choose the 3.3 over any of the speakers in Class A," says CG, however, enthusing over the NHT’s neutrality and ability to play very loud without strain, and adding that he finds himself “without a single area of performance [he’s] heard bettered by any other speaker.” (Vol.16 No.12, Vol.17 No.3)

**Nelson-Reed 8-04/CM: $3650/pair**

Very sensitive, with a wide, compression-free dynamic range. Rather forward midrange balance, but a clean, transparent treble that opens “a gorgeously clear (and alive) window on the recording,” said JGH in his review. The review samples’ out-of-spec woofers resulted in the overall sound being too lean; JGH’s later audition of a pair with the proper woofers convinced him of the design’s musical worthiness. (Vol.15 No.3, Vol.16 No.1)

**Nestorovic Type 5AS Mk.IV: $4500/pair**

Nestorovic Type 5AS Mk.IV Signature: $7000/pair

A four-way dynamic loudspeaker that features a patented bass alignment wherein a driven second woofer also behaves somewhat as an auxiliary bass radiator. DO felt that the Nestorovic’s midband had a velvety, non-resonant texture, especially on female voice, and that its highs were free from sizzle and tizz, though he did find that stage-size depth did not develop as fully as he’d expected. JA finds the balance a little forward in the treble, which might be a factor here, though it does lead to a synergistic balance with tube amplification rather than solid-state. Nestorovic’s own NA-1 monoblocks gave liquid-sounding nids and a bold, sweeping soundstage, reported DO, who summed up his feelings thusly: “In terms of tonal balance, LF extension, and dynamic scale, this speaker allows one to fully explore orchestral music without trepidation, congestion, or any form of attendant harshness.” The Signature version pushes forward the performance of its sibling to the threshold of Class A. Bass definition, low-level detail resolution, and lower-midrange transparency are all improved—but at a price! (Vol.9 No.5, original version; Vol.14 Nos.9 & 10, Mk.IV; Vol.17 No.5, Signature)

**Oracle Mentor Studio: $3895-$4995/pair depending on finish**

The Mentor Monitor is a clean-if rather mellow-sounding Class C minimonitor that costs $1800/pair. Add the Studio woofer and the result is the Mentor Studio system, which has very a small footprint. “Everyman’s WATT/Puppy,” joshes the jovial JE. Thewoofer doesn’t high-pass-filter the satellite feed, so the system’s dynamics are limited by the Mentor Monitor’s. Nevertheless, while having a balance on the lean side of neutral, the Oracle proved to be an uncolored performer, with extended, grain-free highs. Soundstaging was distant rather than vivid, felt JE. (Vol.17 No.9)

**ProAc Response Three: $6500/pair ²**

Beautifully finished two-way, dual-woofer design from English designer Stuart Tyler that Jack English can’t recommend highly enough, feeling that it outperforms such Class A speakers as the Thiel CSS and the combination of the Martin-Logan CLS II with the Kinetronics SW-800 subwoofer. When the speaker’s integral plinth is correctly loaded with sand, the bass is "extended, controlled, and powerful." The highs are "restricted and extended, while the soundstaging is excellent, the speakers disappearing. The midrange is...full, lush, musical, involving—in short, lifelike," wrote JE. And CG, for one, would not disagree. (Vol.14 No.9)

**PSB Stratus Gold: $2100/pair $$$ ²**

A large three-way design, the Stratus Gold offers a fundamentally neutral midrange balance matched with very low levels of coloration, a lively yet unfatiguing treble, and a generous, powerful bass. The treble is less prominent when the speaker is used with the grilles on, the sound taking on an appealing accessibility. Excellent value. (Vol.14 Nos.2 & 10; see also PWM’s “Industry Update” in Vol.14 No.4.)

**Ruark Crusader II: $3300/pair**

This moderate-sized British three-way features a superb-sounding dome midrange unit, but lean balance usefully benefits from near-wall placement. The tonal balance is forgiving, the imaging excellent, coloration levels very low. Optimal listening axis is quite low, but RN felt the Crusader’s sound to be unfailingly musical. (Vol.17 No.8)

**Snell B minor: $3599/pair**
A full midbass and good LF extension are combined with a clean, transparent, uncolored midrange and a smooth, detailed treble. Overall balance is a little forward in the midband. This trini, floorstanding, three-way five-driver is one of the best speakers yet to come from Snell designer Kevin Voecx. (Vol.17 Nos.4 & 6)

**Spendor S100: $2990/pair x (stands necessary)**

Somewhat self-effacing quality compared with "audiophile" loudspeakers, and only fair imaging, thought ST, but the outstandingly tight, extended bass, full, rich balance, overall smoothness and lack of coloration through the midrange, and treble sweetness make this beautifully constructed British three-way B&O standers. A B3 recommendation. "No significant flaws," say both Mr. T and MC, the latter regarding the S100 to have "hidden depths." JA emphatically agrees, feeling the Spendor to be one of the best buys in high-end audio. The $195/pair speaker stands from Chicago Speaker Stands are normally supplied, though Spendor intends to introduce its own stands. (Vol.13 No.6, Vol.14 Nos.10 & 12)

**Swans Cygnus: $5895/pair**

A provisional rating for this beautifully finished three-way design, as the woofer alignment has been changed since JE's review. (JE's review samples lacked integration between the woofer and the D'Appolito-configured midrange drivers.) The balance is mellow rather than incisive, but the soundstaging precision is impressively spacious. "Not ideally neutral," comments PWM, but the Cygnus "makes lots of gorgeous, musically involving sound." (Vol.17 No.7)

**Thiel CS3.6: $3990/pair**

Remarkably transparent, extraordinarily uncolored floorstanding three-way speaker, with first-order crossovers and truly time-coherent performance. Very revealing of source imperfections and bass on the edge of the generous side, both of which will mean extra care needs to be taken in system matching. Easier to get good results from, however, than the Genesis III, notes RH. "A terrific bargain" at its price, he concludes. "It's a thrill to listen to, more than I like them." Needs a muscle amplifier to cope with its very low impedance; CG found the Aragon 4004 Mk.II to drive it with aplomb, though he noted its limited loudness capability compared with the NHT 3.3. (Vol.16 No.5, Vol.17 Nos.3 & 5)

**Thiel CS2.2: $2750/pair $5850/pair**

Smooth, civilized, "buttoned-down" sound with good soundstaging, excellent presentation of detail and dynamics, and superbly controlled and nicely extended bass. "One of the best speaker values on the market today," states ST. JA agrees, choosing to use the Thiel's as his long-term reference, though it's fair to note the '2 2's reduced transparency compared with the larger '3.6. He also points out to habitual party-thowers that there's a limited dynamic range in the bass, and notes that a residual brightness will mandate careful system matching. The speaker was launched as the '2 2 but has been renamed, due to Bose's copyrighting of decimal numbers such as "22." (Vol.15 No.4, Vol.16 Nos.1 & 10)

**Unity Audio Signature Pyramid: $5495/pair**

**Unity Audio Signature 1: $3295/pair**

Well-finished three-way design, with a downward-firing woofer, that RD enjoyed immensely. He noted its superb soundstaging and exceptional transparency. Treble is a little crisp and the midbass somewhat exaggerated, but the overall performance is better than the sum of its parts. "Superbly musical," was how RD summed up his review findings. The Pyramid is fundamentally similar to the Signature 1, but replaces the wooden enclosure with one constructed from artificial marble. The results are improved dynamics, less of a boxy signature, and a more solid, three-dimensional presentation, though the upper midrange becomes more revealing, less forgiving, noted RD. Biring option adds $250 to the Signature 1, is standard with the Pyramid. (Vol.16 No.5, Signature; Vol.16 No.12, Pyramid)

**Vandersteen 3: $2395/pair $$$**

As always with a Richard Vandersteen design, this is a well-balanced speaker with no serious faults. Excellent low-bass extension, excellent presentation of musical dynamics, and a good loudness capability are married to a superbly transparent, tonally neutral midrange (when the listener is sitting on the midrange driver axis). Doesn't throw as well-focused a soundstage as the similarly priced Thiel CS2.2, but it's a more forgiving design overall. Needs significant break-in period, 1 though much of this is now done at the factory. Dedicated Sound Anchor rear braces cost $200/pair, but are essential to aim the speaker's optimum axis at the listener. (Vol.16 Nos.3 & 4)

**B—Restricted LF**

**B&W 805 Matrix: $1600/pair (stands necessary) ($$$)**

Borderline Class B, according to LG, but full Class B, according to MC. This well-finished two-way features an exceptionally rigid "Matrix" enclosure. The highs sound effortlessly open, the lows reasonably extended for a minimonitor, and the imaging is well-focused. The speaker goes loud without strain. "A winner at its price," judges JA. Optional 800 Series Variable High-Pass Alignment Filter equalizer costs $250. (Vol.16 No.4)

**Celestion SL700SE: $3399/pair x (stands included)**

Once considered very high for a small speaker, the price includes excellent stands. Improves over the SL600Si in the areas where that speaker excels, and sets new standards for a box loudspeaker in transparency, neutrality, and upper-bass clarity. In contrast with the SL600Si, overall balance is rather on the bright side, which demands careful system matching. Auditioning of the current "Special Edition" version reveals better integration between tweeter and woofer, and an even cleaner upper bass, though the tradeoff appears to be a less involving sound overall. "A bit polite," says ST. Though the SL700 is deficient in low bass in absolute terms, rate of rolloff in-room is slow enough that it almost qualifies for inclusion in the "full-range" Class B category. But only almost. (Vol.11 No.9, Vol.14 No.10, Vol.15 No.4)

**Celestion SL600Si with DLP600: $2798/pair (stands necessary)**

Celestion's DLP600 digital-domain loudspeaker processor ($699) fits between the CD transport and DAC; with it, the SL600Si's soundstage snaps into focus to an extent that JA hadn't heard from any 1 A tip from TN for breaking-in speakers: Place them face to face, but wired out of phase. You can then drive them hard with pink noise from a Test CD, but there's less sonic pollution to annoy the other members of your family. To a large extent, the speakers' outputs cancel.
speaker other than the Wilson WATT, Avalon Eclipse, or Quad ESL-63. The speaker's dark-sounding treble also becomes more natural/airy/spacious. The lower-midrange congestion remains unimproved, however. Otherwise, the '600 system would beat out Celestion's SL700. MC adds that the '700 has a better sense of pace and timing. [Vol.15 No.8]

**Ensemble PA-1:** $3250/pair ($3400/pair with bi-wiring option) ▲

**Ensemble Reference:** $5150/pair ($5300/pair with bi-wiring option) ▲ (stands necessary)

Two almost identical-looking expensive monitors from Switzerland combine an excellent soft-dome tweeter with an unusual laminated-cone woofer and a rear-facing passive radiator. Both are sensitive to being overdriven by subs, but, provided a good high-pass filter is used, the Ensembles generate a neutrally balanced, if bass-shy, sound with better imaging (“... spatial resolution was outstanding,” according to DO) and less upper-bass congestion than the standard Celestion SL600Si. The Reference better the PA-1 in every way—at a cost. A “remarkable midrange,” notes MC of the Reference, but adds that its sound is something of an acquired taste. Both speakers require considerable break-in periods to reach their optimal performance levels. Matching Landmark stands cost $1280/pair. [Vol.13 No.6, Vol.14 No.10, Vol.15 No.12]

**Martin-Logan CLS II/Z:** $3500/pair (stands optional)

“A very special speaker,” sums up JE about the fourth iteration of this stunning-looking, pure electrostatic design, though he notes that it will not be for everyone. “Remarkably coherent, sonically,” he notes, with a “magic immediacy” to its sound. II/Z has a much kinder impedance, though it still drops to 1.5 ohms. (Vol.9 No.6 & 7, Vol.10 No.1, CLS I; Vol.14 No.12, Vol.15 Nos.2 & 3, CLS IIA; Vol.17 No.6, CLS II/Z)

**Monitor Audio Studio 20SE:** $3999/pair $5999/pair, depending on wood veneer or piano lacquer finish

A floorstanding descendant of the first Monitor speaker (the Studio 10) to offer a metal-coned woofer. With a similar drive-unit complement, the two-way Studio 20 offers a big, transparent, well-focused soundstage presentation with an excellent sense of detail and sufficient bass fullness, said RH. ST disagrees strongly, feeling that the Studio 20 is too expensive, considering it doesn’t go low or play very loud. “Not for recrest!” he warns. JA feels the 20 to be a superb speaker when used within its limitations, though he noticed a occasional wry edge to female voices and boy sopranos. RH also noted this in his review, but thinks this will be ameliorated by a good tube amplifier. Current “SE” model has an integral plinth 4" taller than the version reviewed. [Vol.14 No.12, Vol.15 No.4]

**Monitor Audio Studio 6:** $1999/pair (stands necessary)

Similar drive-units to the Studio 20’s, but with just the one woofer, mounted in a small, stand-mounted reflex enclosure. A little lacking in the pace’n’rhythm department, thinks MC, but a natural if forward balance, superb transparency, excellent soundstaging, and a musically involving sound, felt JA. A slight mid-treble glare will mandate careful system matching, however. Beautiful black and rosewood piano-lacquer finishes add $500/pair. [Vol.17 No.2]

**ProAc Response Two:** $3000/pair (stands necessary)

“Solid Class B,” decided CG, “but only when the Response Two are used with the matching Target stands ($700/pair) coupled to them with Blu-Tack, or the RoomTune Torture Clamps.” A slight tendency to woodiness in the lower mids is exacerbated by the wrong stand, JA found. While the massively constructed Response Two doesn’t have quite the image focus of the Wilson WATT, the SL600/1DLP600, or the Acoustic Energy AE1, it has a more accessibly even tonal balance, with a smooth yet detailed treble, enough bass to be very musically satisfying, and much better dynamics than either the Celestion or the Acoustic Energy. “A stunning product that delivers a quality of sound most audiophile speakers only hint at,” summed up CG. [Vol.15 No.7; see also Vol.15 No.9, p.162.]

**ProAc Response 1S:** $1800/pair $$$ (stands necessary)

A tiny sibling of the Response Two, the Response 1S blew WP away with the sheer musical immediacy of its presentation. No deep low frequencies, of course, and even a degree of midbass MIA, but the overall sound is “open and full... sporting a rare degree of uncolored coherence,” he noted, with a realistic body to its imaging. Benefits from good, rigid, open-frame stands like the ‘Targets. The baby ProAc “does right by the music,” was how WP concluded up his review. [Vol.17 No.9]

**Quad ESL-63 USA Monitor:** $5500/pair ▲ (stands necessary)

Very musical sound, with very low midrange coloration, natural, precise imaging, excellent soundstaging, and very good resolution detail when listened to on the optimal axis. The highs roll off considerably off-axis, which can lead to a dull, lifeless sound in overdamped rooms. The low treble is a little resonant (perhaps due to the dustcover), which bothers some listeners (LA, MC) more than others (ST, LG, DO, JA). Low frequencies are tight but not very deep, while maximum volume capability is somewhat limited. (At Santa Fe’s 7000’ altitude, this is a strict 97dB on peaks.) Later models sound less dry than early-production models. Can really come alive with the right amplifier, and benefits from modifications, most especially suitable stands (we’ve found Arciris to work well). Works well with such dipole subwoofers as the Finnish Gradient SW-63 (see “Subwoofers”) and the Celestion System 6000, while LG has achieved an excellent match with both the omnidirectional, servo-controlled Velodyne ULD-18 and the Muse 18. The current version, the USA Monitor, has a stiffer steel frame, a revised protective grille, and a reduced plate gap for higher sensitivity. [Vol.6 Nos.4 & 5, Vol.7 Nos.2 & 7, Vol.8 No.3, Vol.10 No.1, Vol.12 Nos.2 & 6; see also LG’s review of the Gradient SW-63 subwoofer system in Vol.14 No.10, and “Editor’s Choice,” Vol.15 No.12, p.17].

**Sonus Faber Electa Amator:** $4500/pair (stands necessary)

“The Amator has the Extrema’s wonderful imaging and huge soundstage, without that loudspeaker’s dynamic range, bass, or transparency,” says LG, though JA and TJN agree with JE that it’s still a superbly natural-sounding, if very expensive, mini-monitor. “A powerful and involving sound,” adds MC. Matching stands cost $950/pair. [Vol.15 No.10]
Thiel CS1.5: $1990/pair $$$

"Among the most exciting speakers I've encountered in years!" exclaimed the occasionally occupations jaded Mr. Tellig about the baby Thiel, adding that, "If you're after truth of timbre, resolution, superb soundstaging...midrange magic and clarity...the CS1.5 may be just what you want." Dynamics are naturally limited; while the tiny Thiel goes lower in the bass than you might expect, it's still a "wonderfully sane" speaker "that's about quality, not quantity," in the words of ST. (Vol.17 No.8)

Totem Acoustic Model 1: $1495/pair $$$

(stands necessary)

Astonishing LF response for such a small speaker, found LG, with smooth, sweet highs, excellent dynamics, and palpable, well-focused imaging, particularly in the depth plane. Some midrange prominence, however. A GL favorite. Suggested stands are the Target Model R4 ($600/pair), HJ ($250/pair), or HS ($180/pair). (Vol.16 No.4)

C

Acarian Alon 1: $1290/pair

Our initial review samples had a severely flawed midrange that precluded recommendation. Redesigned second samples sounded much more neutral, allowing this floorstanding three-way's superb soundstaging, well-controlled and weighted (if exaggerated) bass, and lack of boxy colorations to be appreciated. (Vol.16 Nos.9 & 12)

Audio Artistry Mozart: $2795/pair

A speaker possessing a classic tonal balance and excellent dynamics, the Mozart was particularly adept at preserving the rhythmic drive and pacing of live music, said DO. JGH was impressed by the Mozart's lively, vivid presentation and big bass, but both aspects of the speaker's balance tended to outstay their welcome, he found. DO also felt the upper registers to be lively and a bit metallic. Investigate a tube amp, he says; works well with the Cary 805. Review sample had some resonant problems in the lower mids, said to have been fixed in production. (Vol.17 Nos.1 & 8)

Audioscopic ES-100: $3200/pair

A tall, full-range electrostatic of modest yet elegant proportions which, according to DO, delivers significant electrostrophic virtues: transient speed, soundstage transparency, and spatial resolution. The range above 1kHz is world-class— as long as you sit exactly on-axis. A lean tonal balance emphasizes the upper registers and makes amplifier matching particularly critical. The SW-100 bass panels ($3200/pair) connect in parallel without any crossover networks, and augment LF output below 300Hz without compromising imaging specificity and coherence. "Still not a rock'-n'-roll speaker," advises DO. Use of the BYLUX AC line filter further enhances midrange clarity. Wood finish adds $200. (Vol.17 Nos.3 & 10)

B&W Matrix 804: $2220/pair

Borderline Class B, said TJN of this elegant two-way—"a miniature 801"—adding that it produces an open, generous sound with a well-defined soundstage. Apart from some warmth in the upper mids, the lows are intricately clean and reasonably extended, though TJN points out that using B&W's "800 Series Variable High-Pass Alignment Filter" to equalize the speaker's bass to be flat to below 30Hz restricts the dynamic range too much to be useful. He also commented on some occasional nasality, though this was generally insignificant. (Vol.14 No.11)

Eminent Technology LFT-VIII: $1500/pair

Combining push-pull planar-magnetic drive-units for the treble and midrange with a conventional moving-coil woofer, the LFT-VIII's bass is a little rich-balanced, and the full complement of high frequencies is only to be obtained when the listener sits jewel with the center of the tweeter and to the inside of the tweeter midrange ribbon. The speaker's midrange smoothness and lack of boxiness impressed the heck out of CG, however. (Vol.16 No.2)

Green Mountain Audio Diomante: $3995/pair

Expensive for Class C, due in part to its cast mineral-loaded-resin, two-part, transmission-line enclosure, and balanced to be rather mellow, but this time-coherent design impressed the heck out of SS with its "non-impressive"—ie, musically natural, non-"hi-fi"—sound quality. Works best with solid-state amps, he decided. (Vol.17 No.6)

Linn Keilidh LS300: $1295/pair (stands necessary)

Borderline Class B, according to RH, who enjoyed this Scottish speaker's tuneful, "fast" bass, smooth, uncolored midrange, generally clean treble, and—most importantly—seamlessly musical and involving overall presentation. Treble can be a bit sibilant, however, and the lower midrange lacks ultimate transparency. One of the few high-end speakers that works best near the wall behind it. RH says he would choose the Keilidh over all other loudspeakers currently in Class C. Polymer/granite bases—essential—add $200/pair. Performance can be taken even further by bi-amping and bypassing the internal crossover. (Vol.16 No.9)

Mission Cyrus 753: $1800/pair

Unusual floorstanding design uses four small woofers—two reflex-loaded, two in sealed enclosures—to give good balance between bass extension and definition when speaker is used, as intended, near the wall behind it. Intrinsic treble balance is on the lively, incisive side; but with the speakers not toed-in to the listening seat, the clean highs are in good balance with the uncolored, very transparent midrange. A JA favorite. (Vol.16 No.9)

NHT SuperZero/SW2 active subwoofer: $930/system $$$ (stands necessary)

The active SW2 woofer (its -6dB point is 35Hz) turns the bass-less SuperZero—see later—into an impressive, almost—full-range speaker system, preserving the tiny speaker's virtues. CG got the best sound using Y-adaptors and simple, passive first-order filters in the satellite amplifier signal path (see "Subwoofers"). (Vol.17 No.1)

PSB Stratus Silver: $1500/pair $$$

A detailed and clean, slightly midrange-forward presentation, with a surprisingly potent bass but a touch of crispness in the highs, was how TJN summed up the sound of this elegant Canadian two-way floorstanding speaker. Borderline Class B, adds PWM, feeling that the Silver is not quite as uncolored in the midrange as the more expensive Stratus Gold. (Vol.17 No.7)

Snell Type D: $1699/pair $$$

A very transparent, open, and unmuddled presentation, said TJN, adding that this three-way tower speaker's low-frequency performance was "amazing." An amazing lack of coloration at the price, confirms PWM, adding that the Type D has an impressive abil-
ity to remain open and transparent with large-scale orchestral recordings. Borderline Class B, though an occasional edge in the lower treble will mean careful system matching. (Vol.17 No.7)

**Snell Type E/III:** $999/pair \( \Delta \) $$$

*(stands necessary)*

A smooth treble is coupled with a natural, if remotely balanced, midrange, while the soundstage focus is somewhat diffuse. “Awfully good for what they are!” says LL, however, of this inexpensive, ported two-way. LG was similarly impressed, feeling the Type E to have “…good dynamic range [and] stunning bass response [with] complete control, no overhang, no peakiness….it truly offers the wonder and excitement of recorded music at a modest price.” Needs to be used well away from walls; matching stands cost $129/pair. (Vol.14 No.10)

**Vandersteen 2Ce:** $1295/pair $$$ *(stands optional)*

The latest version of Richard Vandersteen’s classic three-way design has a larger cabinet and a revised drive-unit. The intrinsic balance is a little on the warm side, with a forward midrange and rather limited transparency and image focus. However, while there may be other loudspeakers that perform better than the 2Ce in one or more areas, there is no speaker in its price range that does so little wrong across the board. TJN wrote that it spreads its compromises so that there is no particular area of weakness; DO was impressed by the 2Ce’s tonal balance and sense of pacing; JA noted that it offers more extended lows than its competition. A great value for the dollar. The Vandersteen bases for the 2Ce cost $125/pair. (Vol.16 No.4 & 9)

**What’s Through Monitors?** 202 Leadline: $2500/pair *(stands necessary)*

Well-made, large, Australian two-ways with, as the name suggests, lead used to add mass to and damp the enclosure walls. Good low-end weight, definition, and dynamics are married to good imaging and a very clean upper treble. The lower midrange sounded thickened, however, while a tendency for the low treble to sound hard restricted overall dynamic range, thought JA. Matching stands cost $200/pair. (Vol.17 No.8)

**C—Restricted LF**

**Acoustic Energy AE1:** $1595/pair \( \Delta \)

*(stands necessary)*

Tiny reflex box with metal-dome tweeter and metal-cone woofer. Redefines the art of miniature speaker design, according to JA, due to its relatively high dynamic range, electrostatic-quality treble, and hearthrough, if somewhat forward-balanced, midrange. Bass is perhaps the weak point, with rather a slow-sounding character that keeps the AE1 from Class B. Now supplied ready for bi-wiring with gold-plated binding posts. Price is for satin black finish (other finishes are available on request); matching stands cost $795/pair. (Vol.11 No.9, Vol.15 No.7; see also Vol.15 No.9, p.162.)

**Audio Physic Step:** $1395/pair *(stands necessary)*

Matching Sound Anchors stands cost $250/pair. (See JE’s review in this issue.)

**Celestion SL600Si:** $2099/pair \( \Delta \)

*(stands necessary)*

Though lacking the bottom octave-and-a-half of bass extension, and possessing slightly depressed mid- and extreme-treble ranges that make system optimization difficult, the SL600Si combines lower-midrange transparency and holographic imaging (areas where it badly beats most of the moving-coil competition) with a musical, if dark-sounding, balance unique for a box speaker. Worth using with high-end electronics. Latest Si version has revised crossover layout to allow bi-wiring, and is more transparent in the treble, though a touch of midband congestion remains. Sound quality significantly improved by $699 DLP600 DSP engine. Good stands, such as Celestion’s own $299/pair 18” SLSis, are mandatory. (Vol.10 No.2, original version; Vol.12 No.5, Vol.15 No.8)

**Celestion 100:** $1199/pair *(stands necessary)*

While not as inherently musical or as sweet-sounding as Celestion’s SL600, or as transparent as Acoustic Energy’s AE1, the well-finished 100 offers low levels of coloration, excellent imaging, articulate if not particularly extended low frequencies, and very clean-sounding if slightly uptilted highs. Low treble gets a little grainy at high levels, with an occasional touch of congestion in the lower mids. Price is for walnut or black oak finishes; a pair in mahogany veneer costs $1299. (Vol.15 No.6)

**Dunitech PCR125:** $1995/pair *(stands necessary)*

Rather a lightweight balance and some unitidness in the highs are offset by good articulation, excellent image focus and depth, and good dynamic range. Current production has a slightly revised crossover, said to improve the treble presentation. Matching stands cost $295/pair. (Vol.17 No.8)

**Epos ES14:** $1395/pair \( \Delta \) *(stands necessary)*

A speaker that has long been an ST favorite, the ES14 seems to be typical of small British speaker designs in that it features a metal-dome tweeter in a well-braced cabinet with a minimal crossover and the option for bi-wiring. The result is a superbly coherent sound that, according to TJN, kept drawing him into the music. Ported bass is both a little lightweight and somewhat soft, but the upper bass and midrange are very low in coloration, with excellent transparency. Matching stands cost $250. (Vol.11 No.6, Vol.13 No.1)

**Harbeth HL-P3:** $995/pair *(stands necessary)*

Excellent imaging and very musical, well-balanced sound from this neutral, LS3/5a-sized English miniature. JA’s reference minimonitor! Exotic veneers add $200/pair. (Vol.16 No.12)

**Oracle Mentor Monitor:** $1800/pair *(stands necessary)*

See the Oracle Mentor Studio. (Vol.17 No.9)

**PSB Stratus Mini:** $950/pair $$$ *(stands necessary)*

Well-finished, well-engineered two-way with a neutral balance, low level of coloration, and superb soundstaging. Bass is intrinsically lean, but careful room placement can result in well-defined but reasonably well-balanced lows. Review sample had a rather congested lower midrange due to a severe cabinet resonance, said to have been minimized in current production by a repositioning of the internal bracing. Matching stands—essential—cost $150/pair. About to be replaced by a new version. (Vol.16 Nos.6 & 7)

**Sonus Faber Minima Amator:** $3000/pair *(stands necessary)*

A large measure of the larger Electa Amator’s perfor-

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**Recommended Components, October 1994**

27
Joseph sounding impressed a Current midrange ples Epos midrange. Borderline midrange. woofer NHT crisp cally free integration heights stands rather $350/pair. dynamics. Excellent Beautifully not stands the of Faber performance (stands tested. just worth limited $230/pair music. If music. like most $230/pair differs thin" Vol.13 Vol.15 (Vol.13 No.11, p.89) compared with the original's rubber surrounds. Originally manufactured by Rogers, who discontinued it at the beginning of 1993, the LS3/5a is still manufactured by Spendor and Harbeth: The former has one pair of input terminals; the latter is bi-wireable with four gold-plated Michell connectors—see "Industry Update," Vol.15 No.2—and is available in "exotic" veneers for an additional $200. (Vol.3 No.12, Vol.4 No.1, Vol.7 No.4, Vol.12 Nos.2 & 3, Vol.14 No.10, Vol.16 No.11)

ProAc Studio 100: $1400/pair (stands necessary) (See CG's review in this issue.) Signet SL280 B/U: $700/pair $$$ (stands necessary) Designed by an ex-AR engineer, this two-way was found by TJN to rival the Epos ES14 in being musically satisfying at a modest price. Good bass extension is coupled with excellent midband transparency, though the treble has a tendency to sound a little bright. Model reviewed was actually the discontinued SL280, which was identical apart from being more expensive and substituting wood veneer for the B/U's vinyl finish. (Vol.13 No.10, Vol.14 No.10) Sonus Faber Minuettto: $1500/pair (stands necessary) Matching stands cost $395/pair. (See CG's review in this issue.)

E Dana Audio Model 1: $199/pair $$$ (stands necessary) One of the least expensive loudspeakers listed in "Recommended Components," Dana's Model 1 is only available via mail order. The original sample had a rather warm bass and a rather depressed treble, which led to a forgiving balance offset only by a degree of resonant coloration in the low treble. Latest version is more forward-balanced. Works best away from room boundaries, when it "...squeezes the most music out of the least money," according to RH, while JE adds that it offers "a very fine level of performance for the price." (Vol.13 No.9, Vol.14 No.10, Vol.15 No.7) KEF Q60: $400/pair (stands necessary)
When used against the rear wall, the Q60’s bass is full and generous, which adds to the speaker’s clean highs and good dynamics. Imaging a little imprecise, however, and an upper midrange that sounds rather peaky. Perhaps sounding too polite in absolute terms, the Q60 is still an excellent value, according to ML, with an overall performance closer to Class D than most of the other entry-level loudspeakers. (Vol.15 No.5)

Mirage M490: $600/pair (stands necessary)
Extended bass lacks definition but is offset by lush, transparent midrange, good overall clarity, and highs that are non-fatiguing, if a little excessive in absolute terms. Inexpensive loudspeakers for the music lover rather than the audiophile, said GL. Matching stands cost $110/pair. (Vol.15 No.5)

Paradigm Atom: $169/pair $$$
(stands necessary)
A tiny speaker that gets the midrange right, according to SS, with reasonable dynamic contrast and some upper-bass bloom. Matching S-70 stands cost $89/pair. (Vol.17 No.9)

Pinnacle PV2: $299/pair (stands necessary)
Borderline Class D sound, though the presence region sounds a little emphasized and hard, and bass is too lean with the wrong amplification. Midrange has a slight “boxy” coloration but is otherwise clean, and the imaging is good for a speaker this inexpensive. (Vol.15 No.5)

PSB 500: $499/pair (stands necessary)
Balance is warm and full rather than tight and lean, but impressive bass weight doesn’t turn to boominess. Refined highs for an inexpensive speaker. The two-way 500 achieves “that rare balance of ease and detail,” according to TJN, with moderate coloration and congestion only setting in at high levels. “An attractive mix with no glaring weakness.” (Matching SP5 stands cost $79/pair.) (Vol.16 No.7)

PSB Alpha: $199/pair $$$ (stands necessary)
“An outstanding audio bargain,” proclaimed JE of this little two-way. Designed to be used close to the rear wall, the Alpha plays surprisingly loud without strain, though toe-in is best avoided to minimize harshness. Optimum with electronics that sound soft. Imaging somewhat vague compared with the similar-priced Danas. Upper bass a little exaggerated and a bit “hooty” compared with the NHT SuperZeros. (Vol.15 No.7, Vol.17 No.1)

RA Labs Black Gold Mini-Reference: $173/pair inc. freight $$$ (stands necessary)
A bit rolled-off on top and not the most detailed speaker ST had heard, but this very inexpensive speaker’s sweet balance, accurate tonal balance, and surprisingly natural-sounding, if not wonderfully extended, lows grew on him to the extent that he proclaimed it “one of those rare, almost miraculous occasions in budget hi-fi [where] everything that could have gone right did.” Maybe even Class D. Benefits from high-quality amplification. (Vol.17 No.5)

Signet SL260B/UB: $500/pair (stands necessary)
An exaggerated treble mandates careful system matching, but the sound from this inexpensive, bi-wireable two-way is otherwise reasonably well-balanced, with quite good bass extension and definition, and a spacious soundstage. (Vol.16 No.1)

Snell Type K/II: $479/pair X (stands necessary)
A tight, tuneful, articulate bass, said RH of this modestly priced two-way design, though with less weight than the Phase Tech PC-80. The mids are neutral, the highs open and airy, but there’s a trace of hardness in absolute terms that can’t altogether be ameliorated with the tweeter-level control. Nevertheless, RH enthusiastically recommends the K/11 for its musicality natural presentation. A TJN favorite. (Vol.14 Nos.1, 7, & 10)

K
Dunlavy: SC-1, Spica TC-60, Genesis 11.5, Infinity Epsilon, Apogee Studio Grand, Esoteric Speaker Products Concert Grand, Magnepan SMG8, Snell C/V.

Deletions
Wilson Audio WATT 3/Puppy 2 replaced by WATT 5/Puppy 5, not yet auditioned; Magnepan MG2.6/R replaced by MG2.7R, not yet auditioned; ProAc Response 3 Signature replaced by Response 3.5, not yet auditioned; KEF R107/2, Genesis Technologies 1M-5200, JM Lab Micron, Phase Tech PC-80, all not auditioned in too long a time; Snell Type B now too expensive for sound quality when compared with Snell B Minor and new Snell C/V; Advent 25th Anniversary Limited Edition, Genesis TechnologiesGenre 11, and Harman/Kardon Fifty discontinued.

Subwoofers & Crossovers

Editor’s Note: DO’s mini-survey in Vol.12 No.1 indicated that true subwoofers, capable of reproducing the bottom two bass octaves at realistically high sound levels, are almost always rare and expensive beasts. In addition, the problems of integrating one or two subwoofers with high-quality satellites are major if the integrity of the upper-bass/lower-midrange region is not to be compromised. (Peter Mitchell offers good advice on where to place one or more subwoofers in the listening room in Vol.16 No.3, pp.65–67.) We recommend that those trying to subwoofer on the cheap instead look at the possibility of acquiring more-expensive full-range loudspeakers.

A
Kinergitics SW-800: $3995/system
Twin-tower, 10-driver stereo subwoofer offering true 20Hz extension and intended to be used with the Martin-Logan CLS 11As, when it gets a Class A recommendation from JE. Price includes a versatile crossover, but a stereo amplifier, preferably a good solid-state model, is required. (Vol.15 No.3, Vol.16 No.8)

Muse Model 18 active subwoofer: $3000 ∗ (inc. crossover and amplifier)
Slot-loaded active mono subwoofer extending down to 20Hz with which RH, LG, and CG have obtained great sound (successfully integrating it with Hales Signatures, Quad USA Monitors, and Spica Angeluses, respectively). “A complete lack of plodding slowness,” said RH of the Model 18’s ability to present recorded kickdrum with its character intact. RH also noted that it offers a “dynamic agility” rare in a subwoofer. Part of the reason for the Model 18’s quality is that it’s not intended to extend very high in frequency, thus minimizing its potential for introducing midrange anomalies. In addition, it can be customized for the specific satellites with which it’s to be
used, to give a seamless match. Each “personality card” to adapt the Model 18's crossover for a specific loudspeaker costs $35, and seems to have very little editorial effect on the sound of the satellites (other than the high-pass function, of course). Price is for oak finish; walnut or cherry finish adds $250. Balanced inputs add $500. (Vol.14 Nos.7, 8, & 10; Vol.16 Nos.3 & 5)

B

Apogee Mini-Grand subwoofer: $2595/pair
A stereo system recommended only within the context of use with Apogee Stages, with which it gives good bass extension and midrange integration. Limited in ultimate loudness capability and by the fact that the LF drive signal is not high-pass filtered, leading to significant drive-unit excursion below the port tuning frequency. DAX electronic crossover included in price. (Vol.17 No.3)

Bryston 10B electronic crossover: $1195
Slight sacrifice in image depth and an increase in electronic “edginess” keep this otherwise excellent solid-state crossover from attaining Class A status. Very versatile regarding slopes and crossover frequencies. Balanced inputs and outputs add $200. (Vol.17 No.5)

Entec 12-120 active subwoofer: $2395
(inc. crossover and amplifier)
Though it has a lower dynamic range than the Muse, keeping it from Class A, the Entec nevertheless goes very deep and is very clean and well-controlled. Its interface is extremely versatile, and includes a useful notch filter to tame the most annoying low-frequency room modes. (Vol.16 No.5)

Gradient SW-63: $3000/system (inc. crossover)
Stereo dipole moving-coil subwoofer system from Finland intended to be used with the Quad USA Monitors. Adds useful increase in dynamic range and midbass power handling: “Within the 40–100Hz range I had never heard a Quad system sound so clean, well-defined, and fast,” said LG. Though he found that the SW-63 lacked the bottom octave of ultimate LF extension and was prone to subsonic overload when driven hard in large rooms, he felt the Gradient to be a “must-listen” for any Quad owner. Separate stereo amplifier required. (Vol.14 No.10, Vol.16 No.3)

Velodyne ULD-18 active subwoofer: $2995
(inc. crossover, amplifier, and servo electronics)
LG felt this well-finished, servo-controlled subwoofer system to offer superb bass performance, extending his Quad USA Monitors' low frequencies to 20Hz even at high levels, and adding a considerable degree of dynamic contrast. LG found the ULD-18 to work well with B&W 805s as well; he and PWM would rate it Class A. Others on the magazine's staff disagree, feeling the Velodyne belongs in Class B due to its overall lack of absolute definition and a propensity for adding midrange coloration (this perhaps due to the crossover electronics). It costs $300 to update an older ULD-18 to the current THX specification, though some feel the THX specification trades off bass extension for dynamic range. (Vol.12 No.10, Vol.14 No.10, Vol.16 No.3)

C

Gradient SW-57 woofer: $1995 (inc. crossover)
Like its sibling for the ESL-63, the '57 is a stereo dipole moving-coil subwoofer system, this time intended for use with the original Quad electrostatic. Adds small-signal extension to 25Hz, but has limited dynamic range (though no more so than the electrostatic, of course), so not recommended to headbangers. SS found that, though the Quad sits atop the subwoofer, the listening axis is still a bit low. Balanced inputs/outputs add $105. (Vol.17 No.1)

Velodyne F-1500R: $1595 (inc. crossover, servo electronics, and amplifier)
Excellent value for the money, this low-distortion, versatile mono design almost approaches the performance of the Velodyne ULD-18, but instead adds more system coloration, perhaps, suggests LG, due to its gentle 6dB/octave high-pass crossover slope. Its lack of the '18's “effortless power" leads to a Class C rating, judged LG. Current "R" version includes remote control. (Vol.16 No.3)

D

AudioControl Richter Scale Series III: $349
Versatile six-band, half-octave, low-frequency equalizer and analyzer incorporating bass wave-tone generator and 24dB/octave crossover factory-set to 90Hz. "Muffled" in sound quality, the Richter Scale nevertheless offers the woofer fan an excellent chance of achieving successful integration between subwoofer(s) and satellites. (Vol.12 No.1)

Hsu Research SW10: $800/pair
(inc. passive, variable-frequency, low-pass filter; spiked feet; and a free CD)
An inexpensive, cylindrical stereo subwoofer system that achieves true 20Hz extension. Main drawback is that, as supplied, the satellite speakers are not high-pass–filtered. The subwoofers, therefore, do not increase the satellites' dynamic range (which is the other reason for investing in a subwoofer); hence, the Class D rating. Port is now flared. Supplied passive low-pass filter can be set to a turnover frequency from 40Hz to 100Hz, with 12dB/octave slope. An electronic crossover with 24dB/octave slopes costs $450. (Vol.16 No.3)

NHT SW2 subwoofer: $375 $$$
NHT MA-1 crossover/mono amplifier: $325 $$$
Small, well-made woofer, featuring a 10" drive-unit in a vented box, doesn't go as low as most of the other recommended subwoofers—its measured -6dB point was in the mid-30s. A Class D ranking seems appropriate, therefore. Available with a passive low-pass filter—when impedance drops to 2 ohms in the upper bass—but better used with NHT's matching MA-1 crossover/mono amplifier. Although the 80W MA-1 has high-level high-pass filters for the satellite speakers, CG found these to interfere with the sound's purity when using NHT SuperZeros (see "Loudspeakers"). The best sound was obtained using Y- adaptors and simple, passive first-order filters in the satellite amplifier signal path—see Vol.17 No.1, p.149. JA found the SW2 to be a little one-notey, overall, but not excessively so, provided care was taken in setup and room positioning. Excellent value. (Vol.17 No.1)

Deletions
Wilson Audio Puppy 2 replaced by Puppy 3, currently under review; Genesis Technologies Servo 10 active subwoofer no longer available.

30

Recommended Components, October 1994
HOME THEATER SURROUND-SOUND COMPONENTS

Editor's Note: Although BS has argued cogently against the use of a Dialog-channel center speaker in his Dolby decoder reviews, JGH points out that when several listeners are involved, as will often be the case with movies, a center speaker will be essential if those well off the central axis are to receive dialogue correctly localized at the screen position. (The center speaker should not be placed nearer to the listener than the Left and Right speakers—see Peter Mitchell's "Ground Floor" article in Vol.17 No.9—while TJD generally recommends setting the Center channel's level about 3dB lower than the Left and Right.) Although this section contains dedicated Home Theater products, other THX-certified amplifiers and subwoofers can be found in their respective listings. Regarding the THX loudspeaker issue, we feel that audiophiles shouldn't abandon the idea of using in their Home Theater systems conventional loudspeakers whose sound they like on music recordings.

A

Proceed PAV surround-sound control center: $4195

By far the best-sounding surround-sound processor/preamplifier for high-end Home Theater use, the PAV also has the easiest system setup, with an interactive on-screen display and a learning remote control. "The PAV is the turning point when Home Theater got High End," says CG. "A Class A surround processor, with state-of-the-art Dolby Pro Logic and THX processing, combined with a Class B preamplifier," says TJD. (Vol.17 No.9)

Reference Recordings LD-101, A Video Standard: $69.98

LaserVision disc (1 side, CAV) produced by Joe Kane that contains video and audio test and demonstration tracks to optimally set up a Home Theater system. "No one is seriously into video can afford not to own this disc," says JGH, relishing the opportunity to double-up negatives. (Vol.12 No.11)

B

B&W Home Cinema THX loudspeaker system: $7000 (with two subwoofers, but without amplification)

Consists of three FCM-8 Front THX Cinema Monitors ($1000 each, stands necessary), two wall-mounted SCM-8 THX Surround Cinema Monitors ($1500/pair), and two PCS-8 Cinema THX subwoofers ($1250). (See TJN's review in this issue.)

Fosgate/Audionics 3A THX processor: $2799

Both JGH and LL prefer the Fosgate to the Lexicon CP-3, though JGH hates the remote control. JGH also found the rear-channel steering to be less enveloping with music recordings than with the Lexicon. CG, however, feels that Fosgate's proprietary "70mm" decoding circuit is both faster in its logic steering and cleaner in its audio quality than any Dolby Pro Logic processor he's tried. Apart from omitting the THX mode, the Fosgate 4 ($1000, NR) is identical to the 3A. (Vol.17 No.4)

Fosgate/Audionics 7AT Home THX loudspeaker system: $10,867 (with amplification and one subwoofer)

Consists of three Fosgate/Audionics 4125 four-channel power amplifiers ($1079 each), three MC-220 THX LCR loudspeakers ($1595 each, stands necessary), two SD-180 wall-mounted THX surround loudspeakers ($1850/pair), and one FS-400 THX subwoofer ($995). If the full THX-specification amplifier power is not required for the surrounds, the user can get by with two amplifiers, dropping the system price to $9788. Fosgate speakers need significant break-in, found JGH, but then combine a flat, if rather lean-sounding, response with an up-front balance that JGH feels is nevertheless true to the demands of both music and movie soundtracks. As with the B&W and Snell THX speakers, the front Fosgate speakers feature comb-filter effects in the vertical plane which critics of THX-spec speakers point out as being potentially problematic. The surrounding speakers have user-selectable dipole/bipole radiation patterns when the Fosgate/Audionics 3A processor is used. High Class C is probably the appropriate rating for the Fosgate amplifier. (Vol.17 No.4)

Lexicon CP-3 Plus: $3200

Similar in concept to the older CP-1 Plus, the CP-3 is bigger, better, and incorporates a THX mode to optimize its performance in Home Theater systems. LL finds the Lexicon "an ergonomic nightmare," but JGH enthusiastically recommends it—he found that he mainly used the surround modes for the extraction of recorded concert-hall space rather than the ambience synthesis. Bypass testing revealed a slightly veiled sound, according to JGH. This loss in overall resolution, as well as a cold, edgy character, is laid at the feet of the internal ADC/DACs by CG, and keeps this otherwise excellent unit out of Class A. Review was of the original CP-3. Plus version said to offer improved sound quality and more versatile features; a Follow-Up is underway. (Vol.15 No.12)

 McIntosh C39 THX surround-sound audio/video control center: $3000

Early-production samples of this processor/preamplifier had a problem with the Dolby Pro Logic chip's power supply, which led to unstable image steering. Later samples seemed fine in this regard, found TJD. While the C39 offers versatile surround-sound effects, it appears to be intended more for the fit'n' forget customer than for those who like to endlessly fiddle with controls. Optional THX card adds $425; RCT-1 universal remote control adds $275. (Vol.17 Nos.5 & 8)

 McIntosh THX loudspeaker system: $9500 (with amplification & one subwoofer)

Consists of the McIntosh MC7106 THX six-channel power amplifier ($3000), three HT-1 THX LCR loudspeakers ($1000 each, stands necessary), two HT-3W wall-mounted THX surround loudspeakers ($2000/pair), and one HT-2 THX subwoofer ($1500/each). Though their directivity is to the THX specification, the McIntosh front speakers are free from vertical comb-filtering effects. The overall system sounds "stunning," if somewhat sweet, on movie soundtracks, found TJD, who preferred the HT-1's full-bodied balance to those of the Snell and Fosgate front speakers. The McIntoshes also sounded rewarding and involving with music recordings, the HT-1's midrange being immediate and palpable without being thrust in the listener's face. The amplifier, as

Recommended Components, October 1994
might be expected from McIntosh, is also a worthy performer. (Vol.17 No.5)

C

Lexicon CP-1 Plus: $1595 ✠

Dolby Pro Logic decoding is performed in the digital domain, making what's basically an ambience synthesizer also an excellent buy for home-video surround-sound use. A rather brash, "transitory" coloration is noticeable. Unique in being able to compensate for the effects of tape-azimuth errors. As a surround-sound synthesizer, offers versatile choice of reverberation parameters, although less flexible overall than the now-discontinued Yamaha DSP-3000. Current version has upgraded software. (Vol.12 Nos.1 & 8)

Lexicon CP-2: $995 ✠

Less-well-featured version of the CP-1 that keeps the all-digital processing of the Dolby surround information and the auto-balancing circuit. (Vol.12 No.12)

Snell 500 Home THX loudspeaker system: $5593/system (stands necessary)

This system consists of three MC LCR-500 front loudspeakers ($899 each), two MC SUR-500 surround speakers ($899 each), and a SUB-550 at $549 (the review was of the no-longer-available SUB-750). Matching STA-500 stands cost $99 each. "I was blown away. The sound was as good as anything I've ever heard in a movie theater," proclaimed JGH of the Snell 500 THX speaker system when he used it to play back video soundtracks. On music program, however, he found that, while the Snell had an "awesomey extended low end" and excellent image definition and soundstage depth, the overall sound was too polite/veiled/uninvolved, CG and LL agree, the latter pointing out a residual brightness that's less noticeable on soundtracks than on music. (Vol.15 No.12, Vol.17 No.4)

Rane THX-44 Home THX Audio Equalizer: $1299

Offers one subwoofer channel and three full-range channels, each of the latter with a mix of 1/3-octave controls below 1kHz and two parametric controls above that frequency. Lacks transparency, decided JGH, though he found it an excellent tool for getting the most neutral tonal quality from a full-fledged video Home Theater system. (Vol.15 No.12)

D

AudioSource SS-Three/II: $350 $$$

"A heck of a bargain!" said DAS of this versatile processor incorporating a Dolby Pro Logic chip, subwoofer crossover, and a 30Wpc stereo amplifier to drive the front-center or rear channels. "A slight darkening ... but above-average sound quality," said BS. CG enthusiastically agrees. (Vol.15 No.1)

Mondial MAGIC video ground isolator: $69.95

Provides effective antenna and cable-feed isolation for those whose video systems have hum problems. (Vol.15 No.2)

RF Engineering RC-8-PS power sequencer: $1250

Automatic turn-on device recommended by JGH to Home Theater owners who like to press just one switch. Two sensing outlets; current version will switch up to 40A and will turn on/off up to 16 remote devices. (Vol.16 No.10)

K

Adcom GTP-600, Rotel RSP-960AX, and Fosgate Model 5 surround-sound processors.

HEADPHONES & HEADPHONE ACCESSORIES

A

Grado HP 1: $595 ✠ $$$

Beautifully made, but rather uncomfortable, dynamic headphones with a smooth, transparent, well-balanced sound. The midrange-to-treble transition is seamless compared with the Stax Lambda Pros, though JA feels that the extreme high end lacks air, and the bass is a little generous. Highly recommend-ed, though it must be pointed out that, to get the best from the Grados, you need a dedicated headphone amplifier such as the Melos tube unit, the HeadRoom, or Grado's own battery-powered device. (JA got excellent results driving the Grados with a pair of VTL. Tiny Triodes!) The otherwise identical HP 2 lacks the absolute polarity switches and costs $495. (Vol.14 No.5)

Koss ESP/950: $990 $$$

Class A because of its "ravishing midrange," said TJN of the "950 electrostatic at its original price of $2000—though he did point out a little euphoric softening at the frequency extremes, and a warmer balance than the Stax Lambda Signature. At the reduced price, it's a sonic bargain! (LG has even seen the '950 advertised for as little as $499!) (Vol.15 No.12)

Melos SHA-1 headphone amplifier: $1095

Three-line-level inputs and two low-impedance headphone outputs. Combines tube (Sovtek 5922) voltage-gain stage with FET-follower outputs. Gets the most from good dynamic cans, like the Sennheisers and Grados, with iron-fisted bass control and superb transparency. See "Preamplifiers." (Vol.15 No.10)

Sennheiser Orpheus HE 90/HEV 90: $12,900

Stunningly beautiful, limited-edition system consisting of Bitstream DAC, tube amplifier, and electrostatic headset. A quick, clear, transparent midrange and a pristine, airly treble, but a rather lean, laid-back lower midrange, found TJN. He also found the internal DAC to be less good than the rest of the package. Diffuse-field equalized. Additional HE-90 headsets cost $6900 each. (Vol.17 No.2)

Stax SR-Lambda Signature: $2000 ✠

A diaphragm 1/3 thinner (1;um) than the Lambda Pro, and a drive amplifier (SRM-T1) with a tube output stage distinguish what BS termed "the best head-phones around" in his August 1988 review. As good as the Pros are, the Signatures better them in terms of air and space around instruments, having a more forward midrange and less—if you can believe it—of a "mechanical" quality. (Vol.11 No.8, Vol.15 No.12)

Stax Lambda Pro 3: $1200 ✠

When used with Stax's SRM-1 Mk.II dedicated class-A solid-state amplifier (Stax's passive interfaces add some hardness, veiling, and brightness), the Pro 3 features a totally transparent sound with, according to BS, "oodles of detail." Unlike most "phones, the listener gets a true idea of the surrounding ambience on a recording. Balance is laid-back and bass is a bit fat, not quite blending with the rest of the range, but dis
tortion levels are astonishingly low, and the Pros have a remarkable dynamic-range capability. As delivered, the Lambda suffers from upper-midrange suckout, which becomes less bothersome after some hours use. The low treble still remains a little isolated, however. Very comfortable. (Vol.7 No.5, Vol.10 No.9; see also headphone reviews in Vol.12 No.4, Vol.14 No.5.)

B

**AKG K-1000: $999 \star**

Superb resolution of detail and a sense of effortlessness to the sound of these expensive dynamic headphones, which have hinged earpieces to allow the soundwaves to strike the ear pinnacles at a natural angle. BS was bothered by an excessive nasal coloration, but JA found the degree to which this coloration was present to be very dependent on the angle the headphones made with the side of the head, and the exact relationship between drive-unit and ear canal. Bass response generous, if a little underdamped. (Vol.14 No.3 & 5)

**Grado SR60 headphones: $69 $$$**

An inexpensive cousin to the Class A Grado HP 1 and '2, the SR60 offers a similar, rather dark-toned balance, with a full bass and excellent resolution of detail. A more forward midrange, however. Uncomfortable. (Vol.17 Nos.6 & 10)

**HeadRoom headphone amplifiers: $299–$399 $$$**

Small, beautifully made, battery-powered solid-state amplifier based on a proprietary surface-mount module, and available in two versions: Premium and Supreme. (The module by itself costs $59–$89.) Both versions feature switchable interchannel cross-feeding and time delay to render headphone listening to stereo program less artificial-sounding. The effect of this is surprisingly subtle in A/B comparisons, but proves much less fatiguing in long-term listening sessions. The Premium uses high-quality parts, while the Supreme uses heavier-duty output transistors and adds a treble-boost switch. Drives dynamic headphones (though not, it's reported, the low-impedance AKG 1000s) to high levels with authority and excellent clarity, without this being associated with any brightness. JA bought a Supreme to drive his Sennheiser HD580s, with which it makes a very musical-sounding combination. (Vol.17 Nos.1 & 2)

**Sennheiser HD580: $349 $$$**

Ultra-smooth, ultra-detailed open-back dynamic headphones with full, extended low frequencies. AG found the '580s to be "too civilized," but WP comments that some audiophiles simply miss the grain and other "hi-fi" signifiers that the Sennheisers simply do not exhibit. JA's reference. (NR, but see "Industry Update," Vol.17 No.1, p.41, and TJN's headphone review in Vol.17 No.2, p.114.)

**Stax Lambda Pro Classic: $850**

Supplied with the SRM-Xh amplifier, the Lambda Pro Classic has a slightly thicker diaphragm than the Class A Lambda Signature. Excellent bass extension, image focus, and clarity, but a rather cool, distant balance overall. Headset alone costs $475. (Vol.17 No.2)

**Stax Gamma Professional: $700 \star**

The Gamma offers a superbly clean presentation with airy, delicate high frequencies and excellent low-frequency weight when driven by the SRD-7/Pro interface. Connecting the Gamma Pro to a Stax direct-drive amplifier further refines the sound, but it still lacks the pristine detail and musical focus of the Lambda headsets. (Vol.14 No.3)

**Stax Gamma: $400 \star**

A slightly thicker diaphragm than the Gamma Pro leads to a darker, less transparent sound overall. (Vol.14 No.3)

**Stax SR-34 Professional: $200 \star $$$**

A new 4μm diaphragm gives these inexpensive electrostatic headphones a liquidly transparent midrange without any trace of grain or dryness, offset by a sometimes slightly hard edge to their sound that BS felt was due to the SRD-4 step-up transformer. (Vol.14 No.3)

C

**Beyerdynamic DT990 Pro: $339 \star**

Excellent dynamic headphones, with a neutral midband balance and extended low frequencies. Borderline Class B performance. (Vol.10 No.9, original version; DT990 Pro, Vol.14 No.3)

**JVC HA-D990 Digital Reference: $150 $$$**

These circumaural and closed-back cans produce a sound that's beautifully clear and transparent, without the midrange and midband colorations that afflicts so many other closed-back headphones. Though brass instruments tend toward brightness, they don't sound hard. Full but tight bass, along with crisp detailing without being "etched." (Vol.14 No.8)

**Sennheiser HD540 II: $199 \star**

**Sennheiser HD560 II: $279 \star**

Slightly less neutral than the Beyerdynamic DT990, being more laid-back with a "wispy," even bright, high end. The HD560 II has a more musical balance, lacking the '540's top-octave brightness, notes PWM. Now supplied with Kevlar-wrapped OFC leads rather than the steel (!) originals, which make the '560's treble balance more neutral. (Vol.10 No.9, '540)

D

**Nakamichi SP-7: $100**

A somewhat bland balance keeps these headphones from Class C, but, as BS noted, the SP-7 is one of those rare inexpensive headphones that's basically neutral and essentially honest. (Vol.14 No.8)

K

**Etymotic Research SR-4 in-the-ear headphones; Grado SR80; Home HeadRoom headphone amplifier; Beyerdynamic DT911.**

**FM Tuners**

**Editor's Note:** LG recommends that those interested in purchasing a good FM tuner read JGH's and DAS's discussion on reviewing and measuring FM tuners in Vol.7 No.7, pp.54–57. (See the advertisement elsewhere in this issue for information on ordering back issues of Stereophile.)

**Audiolab 8000T: $1150 $$$**

ExceLS in ergonomics, RF sensitivity and selectivity, and its hash-free audio signal. Excellent sound quality, if not quite matching the low-bass reach of the Day-Sequerra. "I know of no other tuner that has the qual-
ity and performance of the Audiolab," says LG. Very sensitive AM section. (Vol.17 No.5)

**Day-Sequerra FM Reference: $4800**

Using a closed-circuit comparison setup in which the sound from CD could be compared with its sound via the tuner under test, LG found this superbly made tuner to be the most neutral he's heard, offering a musically satisfying sound with a highly defined bass response and a "total absence of white FM haze." RF performance was also excellent, if not quite matching the Rotel RHT-10. The FM Reference pulled in more FM stations with acceptable or better sound quality than any other tuner LG had tried. His verdict? "Redefines the state of the art in FM tuners" with respect to its tuning ability, FM signal display, and sound quality. The $12,800 FM Reference Park Analyzer is identical apart from adding an FM spectrum analyzer. Now back in production at International Jensen's Illinois facility. (Vol.14 No.12)

**Meridian 504: $995**

(See LG's review in this issue.)

**Rotel RHT-10: $1500 $$$**

A superbly transparent sound that allowed DAS to identify the brand of compressor/limiter used by his favorite stations. "Extraordinary fidelity to the broadcast waveform." High output level—3-4V on peaks—may be a problem in systems using very sensitive preamp line stages or loudspeakers. Superbly well-made, says LG, and beats both the Magnum Etude and the Naim when it comes to sound quality. (Vol.16 No.10)

**B**

**Fanfare FT-1: $1195**

SS raved about this remote-control tuner's transparent sound quality, RF performance, and ergonomics, concluding that it was the equal of his long-term reference tuner, the Magnum Etude, with strong-signal stations, and sounding less hashy on stations with poor signal strength. Borderline Class A. (Vol.17 No.6)

**Grundig Fine Arts T-9000: $1199**

Excellent stereo sensitivity and sound quality are let down by brightness, due to the German Grundig's de-emphasis not being changed from the European 75μs time constant to the 50μs required in the US. Limited selectivity means that a good directional antenna will be needed in regions with overcrowded FM bands. (Vol.16 No.2)

**Magnum Dynalab Etude: $1350**

Based on the well-established FT-101A, the Etude features a machined faceplate, WBT output jacks, audiophile-quality passive components, and two extra hours of component selection, matching, and testing during its manufacture. The result is a tuner that sounds only slightly noisier than the extraordinarily expensive Day-Sequerra Broadcast Monitor with the same antenna and station, and features a distortion-free midrange with strong dynamic contrasts. "The sound was wonderfully free of hash, distortion, grit, and glare," said LG, though he feels that it's now borderline Class A, due to the Day-Sequerra FM Reference setting a new standard for sound quality and the Rotel RHT-10 one for RF performance. Nevertheless, he felt the Etude to "represent one of the better balances of price and performance you can find in FM tuners today." (Vol.13 No.8)

**Magnum Dynalab FT-101A: $875**

An analog tuner, the FT-101A is superb from an RF standpoint, particularly in quieting and sensitivity. Selectivity is bettered only by the Onkyo T-9090, Denon TU-800, and Citation 23, but the 101A consistently sounds superior on most stations. Latest version has instant-on feature, defeatable stereo blend, and new board. (Vol.18 No.4, Vol.10 No.3, Vol.13 No.10; see also DAS's Follow-Up in this issue.)

**Naim NAT 01: $3100**

Excels in natural sound quality—"The Naim's ability to involve the listener in the music is remarkable," stated LG—but full automation of tuning parameters to optimize sound quality will annoy DX hounds. DAS was so frustrated that he was driven to uncharacteristic hyperbole: "It will not get stereo stations unless the tower lights are in sight!" Only its average RF performance keeps this otherwise excellent tuner from Class A, feels LG. (Vol.15 No.9)

**Quad FM-66 FM tuner: $1050**

"A must-listen for those with a Quad system," says LG. Can really only be controlled by the Quad system remote control, $250. (Vol.17 No.1)

**C**

**Magnum Dynalab FT-11: $545**

Borderline Class B tuner, according to DAS in his review, that lacks transparency when compared, for example, with the more expensive FT-101. This is perhaps due to its having a single, narrow IF bandwidth. Has good selectivity and a very effective high-blend circuit for receiving weak stations in acceptable stereo. (Vol.12 No.10)

**Pioneer Elite Reference F-93: $900**

An optimal tuner for those a long way from the transmitters. Loaded with sensitivity, selectivity, and elaborate "space-age" tuning displays. Sonics display a natural timbral quality, but are a cut below the best British tuners. Costs more than the similar-performing Onkyo T-9090, but sounds better than most of the digitally synthesized competition LG has heard. DAS recommends trying the less-expensive Pioneer F-449 ($285), which he has found to have a similarly good sound. (Vol.15 No.9)

**D**

**AudioSource TNR One: $229**

A basic, no-frills tuner that DAS felt offered a basically good sound for its price in areas where FM signal strength is moderate to high. (Vol.14 No.3)

**K**

**Yamaha TX-950.**

**Deletions**

Adcom GTP-400, Harman/Kardon TU-9600 and Citation 23, Soundstream T-1, all discontinued.

**FM Antennae**

**Editor's Note:** No indoor antenna can compete with a good roof or mast-mounted outdoor antenna, but as apartment dwellers often don't have a choice, we list the following indoor models.

**AudioPrism 8500: $450**

63"-tall, remote-controllable, vertical phased-array passive FM antenna for indoor use offering a more
directional pickup than the less-expensive 7500. (Also offers an omnidirectional pattern.) Will prove optimal for those who desire to receive relatively weak stations competing with stronger stations on similar frequencies broadcast from other directions. (Vol.14 No.6)

AudioPrism 7500: $210 ×
Low-YSWR (Voltage Standing Wave Ratio), vertically polarized, omnidirectional indoor passive design that will prove optimal in urban, high-signal-strength areas. 89.5” high. (Vol.12 No.5)

AudioPrism 6500: $120 (wood cabinet) ×
If you don’t have the room for an external antenna, then the diminutive 6500 could be a good substitute, offering good reception except for DX-ing purposes. A lot more effective than the small, active, omnidirectional antennae offered by some companies, thought BS. Vinyl-covered version costs $85. (Vol.13 No.9)

Magnum Dynalab 205 FM Booster: $279 ×
Excellent RF amplifier to optimize selectivity and reception in areas of poor signal strength. (Vol.10 No.6)

K
Antenna Performance Specialties FMQ-1. Deletions
BP FM-9700 no longer available.

Home Recording Equipment

Editor’s Note: With the exception of the Fostex and the Crown SASS-1, none of the microphones listed below has been formally reviewed. However, RH has had extensive experience with many professional models, and has compiled most of the thumbnail sketches of their sonic signatures. Other professional models to look out for on the secondhand market are cardioids from Sony (C37P & C500), Milab, and Calrec (AMS), figure-8 ribbons from B&O and Coles, omnis from Schoeps and B&K, and PZM mikes from Crown (though it’s very easy to get a rather colored midband with the PZMs). The Shure SM81 cardioid is also reported to have a quite flat response. Anyone about to undertake serious recording should ignore all “amateur” microphones; as a rule of thumb, you should spend as much, or more, on a good pair of mikes as you do on your recorder.

A
Brüel & Kjaer 4006: $1660 ×
Omnidirectional, 48V phantom-powered, 1/2” capacitor microphone with high dynamic range, extended bass response, and a basically flat response marred only by a small peak in the top audio octave and a rather depressed lower treble. Comes with both diffuse-field and free-field grids. A calibrated sample is used by Stereophile to measure loudspeaker responses. (NR, but see Follow-Up in Vol.14 No.10, and audition track 5, index 7 on the first Stereophile Test CD)

EARR 824M stereo mike preamplifier: $3150 ×
Extremely neutral, very quiet, all-tube, balanced stereo prepamp from Tim de Paravicini, with switchable level controls and 48V phantom mike power. Used by Water Lily Acoustics and also to make Stereophile’s first two commercial recordings. We also use it to make all our loudspeaker measurements in conjunction with a Bruel & Kjaer 4006 omnidirectional microphone. (NR)

Manley Reference A/D converter: $7000
After using this solid-state, UltraAnalog-based two-channel converter to master Stereophile’s Intermezzo and second Test CDs, JA felt it to be one of the best-sounding around. One of the winners in the October 1991 AES Sound-Off. Offers 1DC trim controls, balanced and unbalanced analog inputs, and AES/EBU and S/PDIF data outputs. Analog peak meters with “0” set to -12dBFS are an anachronism, however; you’re better off using a Dorrough or Sony AES/EBU meter or the LED or LCD peak meters on the DAT recorder (or whatever you use to store the data) to avoid running out of bits on peaks. (NR)

B

AKG C414B/ULS: $1199 ×
A popular, large-diaphragm condenser mike, the 414’s extended bass and flat frequency response make it ideal for a variety of applications. Switchable polar patterns, variable pad, and selectable LF rolloff add to its versatility. Transformer-less TL version costs $1499. (NR, but audition track 5, index 11 on the first Stereophile Test CD)

AKG The Tube: $2999 ×
One of the few currently produced tube microphones. Smooth, open, and uncolored, The Tube captures detail without solid-state stridency. (NR)

AMS SoundField Mk.V: $8500 ×
Having used both Mk.III and Mk.IV versions, JA feels that the highly praised variable pickup pattern of this stereo/Ambisonic mike is let down by an overall “grayness” and lack of midrange detail, coupled with a slightly hard lower treble. Nevertheless, it’s excellent at capturing a true stereo image with width and depth. Price includes recording kit, windscreen, 20m of dedicated multi-conductor cable; 100m of cable on a reel adds $450 to price. (NR, but audition track 10 on the first Stereophile Test CD, and track 13 on Test CD 2.)

EARR “The Mic”: $4000 ×
Using a single 6DJ8 tube and a fisted-sized output transformer, this very expensive rectangular-capule (sourced from Milab), switchable-pattern (omni, cardioid, figure-8) mike is somewhat noisier than average and shut-in in the highs, but has extended low frequencies and a midrange that’s extremely true to the original sounds. “No trace of edge or glare,” says RH. Borderline Class A. (NR, but audition track 5, index 19, and tracks 11-18 on the first Stereophile Test CD.)

Neumann U-87A microphone ×
A perennial favorite among recording engineers. Wide, flat response gives it a similar balance to the AKG 414, but with more “reach” in stereo miking applications. Used extensively for vocals. (NR, but audition track 5, index 12 on the first Stereophile Test CD.)

Panasonic Pro 3700 R-DAT recorder: $1599
According to PWM, the 3700 clearly outperforms most mass-market DATs with its MASH oversampling encoders and pretty good analog circuitry. A best-buy storage device when used with an external ADC such as the Pygmy or Manley. Offers better sound with redesigned filters, easier head cleaning, a jog/shuttle control knob, more flexible controls, and...
a lower price tag than its predecessor, the 3500. Includes useful error rate, headlife, and SCMS status indicators (SCMS can be switched out when recording from the AES/EBU data input). Analog in/out-puts are all balanced XLR. Only inconvenience is that a rear-panel DIN switch is used to select between AES/EBU and S/PDIF data in/outputs. (NR)

Tandberg TD-20A-SE Open-Reel Tape Recorder: $2800

The best buy in an open-reel deck, this Norwegian model offers professional-caliber performance at a relatively modest price. Better sound than many professional decks, but ergonomics are not as good as the Revox PRO-99. Now distributed in the US by Tandberg International of Brewster, NY. (Vol.7 No.7)

C

AKG C460B/ULS/CK61: $649

A small-diaphragm condenser mike with removable cardioid capsule (omnidirectional, hypercardioid, vocal, and shotgun capsules are also available). Sound is very detailed, but the tonal balance leans toward the thin and bright, and it has some off-axis peakiness, making it a less than optimal choice for realistic two-mike stereo. Good on drums, however. The C460/CK61 is said to be much improved over its predecessor, the C451/CK1. (NR)

Arcam Delta 100 Dolby S cassette deck: $1800

(See JGH's review in this issue.)

Crown SASS-P Mk.II microphone system: $899

This is a stereo pair of omni PZM microphones in a head-sized foam block that produces ORTF-like, superbly natural stereo imaging. Extended bass response, unlike most directional mikes. Weighs only 1 lb, making it very easy to hang from cables or mount on a tall stand. "One SASS-P unit, one stand, and a portable DAT recorder make a complete but amazingly portable recording system with very satisfying performance," reported PWM. BS found the original version to sound very dry and rather grainy, but the Mk.II is said to be much improved in these areas. (Vol.15 No.7)

Fostex M22RP/S M-S microphone: $1095

Integrated ribbon M-S stereo microphone. While not quite as open at the top as the best capacitor mikes, and possessing a lightweight bass, the M22RP/S captures the original soundfield extremely accurately. Stripped-down version, the M20RP, costs $700. (Vol.11 No.3)

Sony TC-DSM: $750

This decade-old portable will handle metal-particle tape, but offers only Dolby-B noise reduction. It's probably still the best location cassette recorder available short of a portable DAT, says JA. (NR, but see "Letters" in Vol.16 No.10.)

D

Sony WM-D6C Pro Walkman cassette deck: $400

A pocketable stereo recording system of surprising quality and versatility. Alvin Gold feels that to spend more on a cassette deck would be a waste of money. Less expensive WM-D3 ($270) is half the size, but keeps most of the quality. Higher wow and flutter, however. (Vol.7 No.6, Vol.10 No.6)

K

Pygmy AD1 A/D converter, Dorrhogh AES/EBU peak/average level meter, AMS 250 SoundField microphone, Manley microphone preamplifier, Sony DTC-2000ES and 177 DAT recorders, Sennheiser and Shure MS microphones, Bryston BM-P2 microphone preamplifier.

Deletions

Meridian CD-R no longer available; Nakamichi 1000 R-DAT transport and 1000p processor discontinued; Panasonic Pro 255 portable DAT recorder not auditioned in too long a time.

Test Equipment

AudioControl Industrial SA-3050A Spectrum Analyzer: $995

Portable (battery-powered) and inexpensive 1/3-octave analyzer with pink-noise source, ANSI Class II filters, accurate calibrated microphone, and six non-volatile memories. Parallel port can be used with any Centronics-compatible printer to print out real-time response. Factory update increases resolution to 0.1 dB and maximum sp! capability. (Vol.11 No.6, Vol.12 No.3)

George Kaye Audio Labs Small Signal Tube Checker: $499

The essential companion for the dedicated tubeophile, this well-made device tests voltage gain, noise, microphony with the small-signal tube used in typical preamp circuits. Tests both 6.3V and 12V types. As well as a meter, a headphone jack allows the user to hear what's right and wrong with his favorite tubes, as well as looking at the output and the distortion-noise waveform with an oscilloscope. (Vol.17 No.6)

Gold Line DSP 30 Spectrum Analyzer: $1500

Portable (battery-powered) 1/3-octave analyzer with higher dynamic range and better signal resolution than the ubiquitous AudioControl. Features six memories and a variety of post-processing options; can also be controlled by an external PC through its RS-232 port (though the supplied software is clumsy). A review is under way. (NR)

Miscellaneous Accessories

Audio Advisor Elfix AC Polarity Tester: $29.95

Components tend to give the best sound with the lowest potential between their chassis and signal ground. JGH found using the Elfix to be an easy, non-contact method of optimizing this aspect of performance in conjunction with AC "cheater" plugs. (Vol.15 No.6)

Combak Harmonix RF-413 Tuning Cable Rings: $140/four

Rings fit over RCA plugs and speaker cable terminations, offer small improvement in clarity and dynamic contrast, found MC. (Vol.16 No.7)

Combak Harmonix RF-56 & RF-57 Tuning Bases: $220/eight & $240/eight

It's hard to see how these little rectangles can affect the vibrational behavior of anything to which they're attached. MC, however, found them to significantly
clean up the sound of speakers when attached to the drive-unit mounting-bolt positions. He also recommends trying them on the circuit boards of electronic components. SS found that they improved the sound when he applied them to the PCB of his beloved Dennesen JC-80 Mk.III preamp. "If you have a component that you wish to extract every iota of performance from, you should seriously think about Combak dots, no matter how silly they seem," he says. (Vol.16 No.7)

Cramolin Preservit/Deoxit Contact Conditioner: $24.95 $\star$
The right stuff for cleaning up dirty and/or oxidized plugs and contacts. Available from Old Colony Sound Lab. Tel: (603) 924-5626. (Vol.10 No.6)

Ensemble Tubeoxes: $68/pair with "thermo-indicator"
Small one-size-fits-all sleeve made from a weave of Kevlar and copper wire that's said to both lower a tube's operating temperature and minimize microphonic. DO confirmed the latter, but not the former. (Vol.16 Nos.2 & 5)

Gryphon Exorcist system demagnetizer: $150
Small device that plays a 1kHz tone through your system, the loudness of which drops to nothing over a period of 35 seconds, thus eliminating any residual DC magnetism in your components (loudspeakers excepted). "A quieter, wider presentation coming from a blacker, more velvety background," is the result noted by JS. RD agrees, JA points out that if you want to do A/B testing, you should wear ear defenders to prevent your hearing from developing a notch at the same 1kHz frequency, which will make things sound different. (Vol.17 Nos.6 & 9)

Microscan TM-8 & TM-6 vibration dampers: $120/pair, $110/pair
Complex absorbers that fit to the sides or rear of a loudspeaker cabinet using a removable magnetic sheet. (This is supplied in two forms: one for wood surfaces, the other for plastic.) JE found that they did clean up the sound of speakers, but this was not always felt to be an overall improvement. RD also found them to work well on the Unity Audio Pyramid Signature speakers. The original D-8s fell off the back of ST's Advents, however. Measurements showed that, when used optimally, the Microscan units significantly damp the resonant behavior of the speaker cabinet. (Vol.16 Nos.8 & 10)

The Original Cable Jacket: $70 each
Purple cloth bag, filled with a proprietary compound, that's intended to be hung over interconnects, speaker cables, and AC cords and grounded via a flying lead to the wall socket. Whether it's due to the elimination of RF interference, or of mechanical vibrations in the cables, who can say? But all the magazine's staffers who have tried the Jackets report that they clean up a system's sound, making the silences more silent. The largest effect is on the AC cords of source components. JE also reported a significant improvement when he hung a Jacket on his preamplifier's separate ground wire. (Vol.16 No.11)

PEARL Tube Coolers: $5.50 each (small), $11.25 each (large)
Finned metal heatsink available in two sizes to cool both small-signal and power tubes. (Vol.16 No.5)

Purist Audio Design System Enhancer: $150
ST, JS, and RD found that this CD-R, when played through a system for 24 hours, improved the overall sound. JS noting that "the entire presentation seems quieter, background noise is reduced . . . and the soundstage seems wider and definitely deeper." RN, however, found that it made his system sound worse! Expensive for a CD, said RD, but it's a "bargain in terms of what it does." "It works" expostulated JS. Yes, it works, says ST, but points out that you can get the same effect from the less-expensive XLO-/Sheffield Lab CD. (Vol.17 Nos.3, 6, & 9)

Shun Mook Mpingo Disc: $50
Shun Mook Mpingo Spatial Control Kit: $450
The Mpingo Disc is an ebony disc just over 1.5" in diameter and 0.5" thick. Three Discs bonded to a wooden L-bracket make up the Spatial Control Kit, which can be used to "tune" a system's imaging. Read JS's review carefully to get the full scoop on how to use the Discs, but JS is convinced that they effect a major improvement in the sound. "Yup, they work," agreed ST; "they make my $78 AR tunable sound like JA's Linn!" ("Ssh--yeah, right," pouts JA.) Though he's not sure why the Shun Mook Discs have any effect, ST does point out that they can make the sound worse if not used correctly. "Try one or three. Never, never two." (Vol.17 No.2)

Signet SK-302 Contact Cleaner Kit: $25 $\star$
Contains abrasive plastic tools for effective inner cleaning of phono plugs and sockets in combination with Cramolin or Kontak. (Care must be taken not to twist the cleaner and break the RCA socket's internal center connection.) The RCA phono plug and socket cleaners alone cost $10. (Vol.10 No.6)

Sumiko Kontak: $50
Far and away the best contact cleaner CG has used. "The gains in transparency and purity are startling," gushed he. (NR, but see "Industry Update," Vol.15 No.5, and "Manufacturers' Comments," Vol.15 No.9.)

Sumiko Tweek Contact Enhancer: $19 $\star$
This contact enhancer for use on plugs and terminals actually does improve the cleanliness and resolution of the sound of an already excellent system. Keeps freshly made contacts fresh by excluding air. (Vol.10 No.6)

TDK NF-C09 Digital Noise Absorber: $14.95/ pair $\star$
ST found these ferrite rings to improve the sound from CD when clamped over the interconnects between player and preamp. He also found the sound improved—less grit—when a ring was clamped over the coaxial data lead between transport and processor, though we would have thought that this would increase jitter. Best used with AC power cords, JA feels. Cheaper equivalents can be obtained from Radio Shack. (Vol.14 No.1)

WBT RCA plugs: $50/pair $\star$
The best, although original steel locking collet, now replaced by brass, gave rise to neurosis. (NR, but see "Industry Update," Vol.12 No.9.)

XLO/Sheffield Lab Test & Burn-in CD: $29.95
This otherwise conventional test disc—it features the usual soundstage definition tracks, as well as musical examples—offers "system demagnetizing" tracks with a signal similar to that from the $150 Gryphon device, as well as a "burn-in" signal like that on the much more expensive Purist CD-R. The idea is that you program these tracks to repeat, go out to do some shopping, and when you return, your system will sound better. "Highly recommended," said JS. (Vol.17 No.6)
K
Versalab Red Rollers & Wood Blocks, Caig ProGold contact enhancer.
Deletions
AudioQuest Sorbothane Tube Dampers discontinued.

POWER-LINE ACCESSORIES
Adcom ACE-515 AC Enhancer: $180
Effective AC power-line filter with RF and spike suppression, five accessory outlets (300W capability), and two heavy-duty outlets (1500W). Does not seem to limit current demands of power amplifiers. (Vol.11 No.4)

Audio Power Industries Power Wedge Model 116 AC Line Conditioner: $569
Featuring RF filtering, three isolation transformers with dual secondaries feeding six AC outlets, and MOVs to absorb voltage spikes on the AC line, the Power Wedge also offers four filtered outlets to plug your power amplifier(s) into. Highly recommended—"Makes the silences more silent," says JA (though LL cautions that, in some systems, it may detract from overall dynamics). Actual model reviewed was the very similar Model 1. Other models are available with fewer outlets. Audio Power's $279 Power Enhancer and Powerlink AC cords ($159/6') enhance the performance of the Power Wedge even further, found JA, the former increasing the solidity of his system's bass performance. (Vol.14 No.11)

Bob Young Audio BYLUX AC line filter: $585
Formerly sold under the Wave-Perfect name, the BYLUX is recommended as an essential add-on for the Audistatic ES-100 electrostatic loudspeaker. Versions of the line filter are available for other electrostatic speakers. (Vol.17 No.3)

Kimber Power Kord: $150/6'
ST uses Kimber Kords throughout his system, and noted tremendous differences with a Jadis Defy-7. However, try before you buy, he warns. (NR)

Music & Sound POWER master AC cord: $125/6' cord, $142/8' cord, $170/10' cord
Replacement AC power cord that All found to make a worthwhile difference to the sound of power amplifiers. LL had some concerns about the mechanical integrity, but a recent examination by TJN revealed that these cords are about as well-made as it's possible for a non-encapsulated design to be. (NR, but see "Industry Update," Vol.15 No.9, p.61.)

NoiseTrapper 2000 AC Line Conditioner: $1155
Available by mail order, this unit effectively filters RF from the AC line and features a 2kVA isolation transformer. (Vol.14 No.11)

NoiseTrapper Power Strip: $157
AC outlet extender, offering eight hospital-grade Leviton outlets, that CG can't recommend highly enough. (Vol.14 No.11)

Perfectionist Audio Components IDOS
AC Line Conditioner: $150
ST raved about the effect of this patented AC line RF filter on the sound of his Audio Alchemy D/E. But it's a somewhat system-dependent effect, noted CG, who recommends trying before buying, seeing if the sound gets worse when the IDOS is removed. RD finds plugging the energizing leads for his old Quads into the IDOS to be worthwhile. Otherwise similar IDOS II ($200) offers three "digital" and six "analog" outlets. (Vol.14 Nos.10 & 11)

Perfectionist Audio Components DIF
Digital Interference Filter: $250
Small RCA-equipped box that accepts a CD player's analog outputs and feeds the preamp with RF-filtered and ground-isolated signals. Makes the sound smoother, more listenable, said ST; CG also liked the DIF's effects. (Vol.14 Nos.10 & 11)

Tice Power Block/Titan Series II: $1350/$1100
Superb, if expensive, AC conditioning system. Series II models differ from the original in having a TPT-treated AC cord (!) and specially designed capacitors. RD finds the Series II to give a significantly extended top end. Updates cost $300 (Power Block) and $125 (Titan), including return shipping in original packing. A "DIY" Series II parts upgrade kit costs $200 (Power Block) and $50 (Titan). The new expanded-scale voltmeter for the Power Block costs $85. (Vol.13 No.4)

K
Chang Audio Labs Lightspeed CLS6400 Isoline conditioner, Pananux MAX 1000 surge protector/line conditioner.

Room Acoustics Treatments

ASC Tube Traps: $189–$579, depending on size and style
Relatively inexpensive, but remarkably effective, room-acoustics treatment. Tube Traps soak up low-to-high bass standing-wave resonances like sponges. The $315 Studio Trap provides easily tuneable upper-bass absorption that JE found to be a boon with the Martin-Logan CLS IIAs. RH recommends the Tower Traps ($235–$355, depending on size), which proved very useful at eliminating side-wall reflections. (Vol.9 No.3, original Traps; Vol.15 No.2, Studio Traps; Vol.16 No.12, Tower Traps)

Combak Harmonix RFA-78 Room Tuning Devices: $595/16
Quarter-sized metal discs which the user fixes to the ceiling and floor of the listening room. The (surprising) effect was to improve the sound's dynamic shadings, cleaning up reverberant decays to the benefit of intelligibility. MC found that this was apparent on live speaking voice as well as on reproduced sound. (Vol.16 No.8)

RoomTunes: $229/pair
RoomTune CornerTunes: $79/set of four
RoomTune EchoTunes: $39.50/pair
Idiosyncratic and effective "less-is-more" acoustic treatment for your listening room. GL was highly impressed, though others point out that care should be taken to not overdo things. The "Basic Tune Pak" room-treatment set of 4 TuneStrips, 4 CornerTunes, and 2 EchoTunes costs $269. Four TuneStrips cost $169. (Vol.15 No.3, Vol.16 No.1)

RPG Diffusor Systems "Acoustic Tools for Audiophiles"
Effective method of adding diffusive and absorbptive treatment to a listening room. RPG Diffusor Systems

38

Recommended Components, October 1994
STANDS, SPIKES, FEET, & RACKS

Good Speaker Stands
There are too many possibilities, but, briefly, a good stand has the following characteristics: good rigidity; spikes on which to rest the speaker, or some secure clamping mechanism; the availability of spikes at the base for use on wooden floors; if the stand is steel, provision to keep speaker cables away from the stand to avoid magnetic interaction; and the correct height, when combined with your particular speakers (correct height can be anything from what you like best to the manufacturer's design height for best drive-unit integration). Though Stereophile has neglected to review speaker stands, it's not because we think they're unimportant—for speakers that need stands, every dollar spent on good stands is worth $5 when it comes to sound quality. Brands we have found to offer excellent performance are Chicago Speaker Stand, Arcici Rigid Riser, Celestion SLSi, Merrill, Sound Anchor, Target, Sanus Systems Steel and Reference, and Linn. (Sound Anchor also makes an excellent turntable stand, reports T.JN.) Interface material between the speaker and the stand top plate is critical: Inexpensive Blu-Tack seems to reduce the amplitude of cabinet resonances the most (see Vol.15 No.9, p.162).

Arcici speaker stands: $265/pair & $495/pair
Available in versions for the ESL-63 and the original Quads (both $265/pair), and for the Martin-Logan CLS ($495/pair), these elegant stands enable electrostatic speakers to perform as God intended. Clamps them in a rigid embrace, raising the panels the optimal height off the ground. Now includes Super Spikes. The CLS version allows both the height and backtilt of a pair of Logans to be optimized. (Vol.10 No.1, Quad ESL; Vol.17 No.6, Martin-Logan CLS.)

Arcici Lead Balloon Turntable Stand: $375
The opposite approach to that of the Sound Organisation table, with lead bars on top of the structure providing sufficient internally damped mass so that nothing short of an earthquake will disturb the tranquility of the groove/stylus interface (provided the stand rests on a solid floor, points out T.JN.). Supports may be filled with user's choice of material—sand, lead shot, or some combination. Shelves may be added to latest version, though rear pillar restricts their utility. Price includes three Super Spikes. (Vol.14 No.1)

Arcici Superstructure I & II: from $177.50
Basic price includes one shelf. Versatile, well-made, reasonably priced metal equipment-rack system that doesn't require assembly. Our experience from two samples of the II indicates that the shelves can be a little undersized, however. New, bigger spikes eliminate any tendency toward instability. (Vol.14 No.11, Vol.16 No.10)

AudioPrism Iso-Bearings: $49/three Squishy, non-reactive polymer balls with plastic cups are recommended by CG for effective acoustic isolation. (NR, but see Vol.15 No.9, p.162.)

AudioQuest Sorbothane Feet
One of the best means of isolating components from vibration. A set of four big Feet costs $50; four CD Feet, $30. (NR)

Audio Stream Premier R-series rack system:
from $139
System consists of R-30 Expandable Rack, $179; R-ES Expansion Shelf, $49; R-CC Cable Channel kit, $35; and R-10 Amp Stand, $69. Excellent value, noted SS, but not rigid enough for use with a turntable. (Vol.16 No.10)

Bright Star Audio Rack of Gibraltar equipment stand:
$1495-$1595

Bright Star Audio Big Rock Isolation Platform:
$149-$175

Bright Star Audio Little Rock I Isolation Pod:
$129-$144
A very effective isolation system for control of unwanted vibrational energy. Individual components float on a sand bed for energy dissipation and are weighted down with the Little Rock to minimize spurious vibrations. Sonically, the payoff is enhanced resolution of the music’s nuances, says DO. RN adds that this system consistently tightens the bass, increases sonic transparency, and smooths treble hash and grain. (Vol.16 No.5)

Combak Harmonix RF-65/RF-66 Tuning Insulators: $390/four, $470/four

Combak Harmonix TU-201 large-size Insulators: $690/four
Complex feet that MC found to improve the sound of some CD players and preamps, but not others. Some components may need mass-loading to bring the feet into their effective frequency range. (Vol.16 No.7)

German Acoustics Steel Cones: $1 each
These effective brass-colored steel cones have removable hardened tips. (NR, but see Vol.15 No.9, p.162.)

Merrill Stable Table Atlas II turntable stand:
$1097
Exceptitionally stable support, but too massive for sprung floors unless some means—eg, jacks—is found to support the floorboards. An appropriate amount of lead shot will cost around $100. (Vol.12 No.10)

Michael Green Designs AudioPoints for electronics: $49.95/set of 3

Michael Green Designs AudioPoints for loudspeakers: $79.95/set of 4
Sharp-pointed cones made of solid milled brass that RD found to be the best in tightening the bass and improving the midrange focus of Dunlavy SC-IV loudspeakers. (NR)

Microscan TD-24 Transfer Deck: $180
RD found the Transfer Deck to work well under the PS Lambda CD transport and the CAT SL-1 Signature preamp, in both cases producing a general cleaning-up of the sound, especially in the bass. (NR)

Monster Cable Footers:
$30-$100/four, three different sizes
Effective Navcom isolation feet. (NR, but see Vol.15 No.9, p.162.)
RoomTune Deluxe JustaRack: $329-$609
Rigid, well-made component rack. Similar Clamp-Rack—see Vol.15 No.3, p.140—allows the components to be squeezed to reduce the levels of vibration-caused sonic spuriac. (Vol.16 No.10)
Sanus Systems CF-45/CF-35 component stands: $375/$324
Component racks of five (45) and four (35) shelves that T&JN recommends as being good value. Assembly required. (Vol.14 No.11, Vol.16 No.10)
Shun Mook Super Passive Diamond Resonator: $400
Expensive ebony foot with a diamond-tipped steel shaft that JS found to work well under CD transports, amplifiers, and preamplifiers. (Vol.17 No.2)
Solidsteel 410 component stand: $550 in black
Beautiful component rack from Italy, with individually spiked shelves. Can be mass-loaded. JE found that his system’s sonics improved, compared with the massive wooden rack he’d been using previously. Silver finish adds $50. (Vol.17 No.2)
Suniko Navcom Silencers: $70/four ✺
Robert Deutsch finds these damping feet to provide isolation superior to that of Mission’s Isoplats. (NR)
Target TT series equipment racks: $1500n$325 ✺
Finished in basic black, these useful but inexpensive racks feature rigid, welded rectangular stainless-steel-tube construction, price dependent on height and number of shelves (from two to five). Spiked feet supplied, with top shelf resting on upturned, adjustable spikes to optimize it for turntable use. Target’s wall-mounting turntable shelves ($95-$200) are possibly the best way of siting your turntable out of harm’s way, says JA. (NR)
Tiptoes: $11.50 each ✺
The Mod Squad’s greatest invention. The least expensive way of improving the bass and midrange definition of virtually any loudspeaker when used to couple the speaker or stand to the floor. Version with thread or screw costs $16.50 each. (Vol.9 No.1)
Vibraplane Model 2212 Active-Air Self-Leveling Air Table: $1995 inc. S&H
Air-suspension isolation support for electron microscopes was found by JS to work well with CD players and transports. The Passive-Air version, which needs to be pumped up manually, costs $1695 inc. S&H. (Vol.17 No.5)

K
Townshend Audio Seismic Sink, Billy Bags stands, Arcici Levitation stand.

Loudspeaker Cables & Interconnects

Editor’s Note: Rather than classify cables into the usual four “Recommended Components” classes, we’ve just listed those cables that members of the magazine’s review team either have chosen to use on a long-term basis or have found to offer good value for money. They are therefore implicitly recommended. Where a cable has been found to have specific matching requirements or an identifiable sonic signature, these are noted in the text.

Jack English supplies a cogent essay on the whole subject of cables in Vol.14 No.10, but bear in mind that, to a far greater degree than with any other component, the sound of cables depends on the system in which they’re used. Before parting with posibly large sums of money for a cable, it’s essential to audition it in your own system. “Drinking by the label” is always a bad thing to do in hi-fi, but it’s both unforgivable and unwise when it comes to speaker-cable purchases. In addition, what’s the “best” in absolute terms may not necessarily be the best for your system. “Try before you buy” is mandatory with cables; many dealers have a loaner stock of cables to make this easier.

AB points out that mixing’n’matching interconnects and speaker cables is a well-worn route to sonic disappointment. His advice: Always use interconnects and speaker cables from the same manufacturer. PWM strongly makes the point that less is more when it comes to speaker cable, recommending that a mono power amplifier be placed as close as possible to the speaker it drives. This does pass the buck, however, to the preamplifier, which must then be capable of driving long lengths of interconnect. Peter uses Canare Star Quad microphone cable for interconnect, a cable available from pro-sound outlets that CG feels to be the best of its type for live-balanced recording work.

Interconnects

Acrotec 6N-A2010: $400/1m terminated w/6N copper RCA plugs w/direct 24k gold-plated pins
“Very, very good,” according to LL. “Amazing clarity,” reports DO. (NR)
AudioTruth (AudioQuest) Lapis x3:
$495/1m pair terminated w/RCA plugs,
$575/1m pair w/AQ custom XLRs & direct gold-plated FPC sockets & pins ✺
Tonal, the latest version of Lapis (which uses RCA plugs made from Functionally Perfect Copper, or FPC, with the gold plating applied directly to the copper) seems to fall midway between the “mellow” cables—MIT, Monster—and those that are rather upfront in the treble, such as Madrigal HPC and Straight Wire Maestro. JA feels, however, that its outstanding virtue is a lack of grain that allows correct instrumental textures to flow freely and a deep, well-defined soundstage to develop. Auditioning of current-production Lapis (as of 2/91), which uses Teflon insulation and long-grain, solid-silver conductors, suggests that this is the best AudioQuest interconnect yet, apart from their even-more-expensive Diamond x3. Auditioning of identical lengths of Lapis fitted with Neutrik XLRs and AudioQuest’s own custom XLRs suggests that the latter represents a useful step forward in sound quality. (NR)
AudioTruth (AudioQuest) Diamond x2:
$695/1m pair ✺
Superb resolution of detail coupled with a musically natural midrange and excellent low-frequency weight. New Diamond x3 ($950/1m pair) awaiting audition. (NR)
Cardas Hexlink Golden Five C:
$650/1m unbalanced pair ✺
Golden-section stranded, PTFE-insulated interconnect needs an interminable break-in period, but then

Recommended Components, October 1994
has a glorious bass and an excellent sense of pace and dynamics. JE found that upper mids can be a bit forward. (Vol.15 No.12)

Cello Strings:
$320/1m pair terminated w/RCA plugs
$388/m pair terminated w/XLRs
$476/m pair terminated w/Fischers

“Remarkably good for the price,” said LL, “and ‘faster-sounding than the Acrotec interconnect.”(NR)

Expressive Technologies IC-1:
$600/1m pair terminated w/RCA plugs
Rh gets excellent results from this interconnect with the same company’s SU-1 step-up transformer. “Despite the fact that these cables are bigger around than a garden hose, ridiculously bulky, unwieldy, and stiff, the musical rewards they offer are well worth the trouble,” he says. A DO favorite also. Less cumbersome IC-2 is close in sound quality. (Vol.15 No.7)

Finestra Argento Signature Mk.II: $1795/1m pair
Unbelievably expensive cable uses “six-nines” silver conductors, each insulated with Teflon. JE found that it offered exceptional clarity with line-level signals, though he couldn’t eliminate hum when using it as a phone lead. (Vol.16 No.5)

Kimber KCAG: $350/1m pair
RCA or XLR termination XLRs
Unshielded but astonishingly transparent, and offering improved image focus and even better clarity when compared with Kimber’s PBJ. A JE and TJN favorite. (NR, but see Vol.16 No.7)

Kimber KC-PBJ: $65/1m pair
RCA or XLR termination $$$
Unshielded cable that CF found to come very close to KCAG in his system, citing its HF detail, air, clarity, and tonal accuracy. For those with RFI problems, Kimber’s KC1 ($79/1m pair terminated) is the same cable with a grounded shield, but doesn’t sound quite as good. (Vol.16 No.7)

Magnan Type Vi:
$595/4’ pair, $695/4’ pair balanced
“A masterful ability to simultaneously achieve state-of-the-art levels of both musicality and accuracy,” said JE. Combines a rich, full-bodied sound with excellent retrieval of detail. (Vol.15 No.12)

Magnan Type IIIi:
$195/m, $295/4’ pair balanced
Bearing a strong family resemblance to the more expensive Type Vi, the Type IIIi is less impressive at the frequency extremes, according to JE. (Vol.15 No.12)

Monster Cable MS2K Sigma:
$750/1m pair terminated w/RCA plugs
Used by both LG and AB, the latter said that the Sigma interconnect, when used with Classe and Rowland electronics, gave low frequencies “proper weight and extension, the overall sound being very open and detailed” and with excellent timbres. The Sigma cables also threw a soundstage of “vast proportion, the results being alive and musically involving.” AB also noted that the Sigma works superbly with a wide range of equipment. (NR)

NBS Signature: $1600/4’ pair
Very expensive, heavy, and only marginally flexible cable that JE made his reference, due to its complete lack of any sonic signature. He did break three of the Neutrik RCA connectors used, however. (Vol.16 No.11)

Siltech MC4-24: $410/first meter w/WBT 0101 RCAs, $270/additional meter or unterminated* Astounding transparency and imaging, said JA of this silver-conductor cable, now distributed by Fanfare. (NR)

Siltech MC4-80: $1050/first meter w/WBT 0150, $900/additional meter
Even better than Siltech 4-24, the very expensive 4-80 competes with AudioTruth Diamond with its combination of smoothness and retrieval of detail, JA found, but its brilliance is a little brighter overall. (NR)

Straight Wire Maestro II: $275/1m pair terminated w/RCA plugs (MS1) or balanced w/ Neutrik gold XLRs; $80/additional meter
Less laid-back than AudioTruth Lapis or MIT 330, with superb presentation of detail. May be too bright in some systems. (NR)

TARA Labs Rectangular “Master” Solid Core Generation 2: $395/1m pair terminated w/RCA plugs
An RD favorite, with a clear, open, uncongested quality. The Generation 2 revision preserves the clarity of the original but has eliminated the stiffness that RD hated about the earlier version. GL notes that it comes with equipment-friendly locking RCAs. (NR)

Transparent Audio MusicLink Ultra:
$800/1m pair terminated
Similar in broad terms to the MITs that Transparent Audio used to distribute, the Transparent interconnect works well in a WATT/Puppy-based system, says JA. (NR)

Transparent Audio MusicLink Reference:
$1800/1m pair single-ended
Very pricey, but very right at capturing a correct sense of timing, says WP. Not even to be considered, however, unless you’ve dealt with the basics in your system, he warns. (NR)

van den Hul The First:
$233/0.6m pair, $333/1m pair, $500/2m pair
Unique cable with carbon-fiber conductors. MC enthuses about its detail and linearity at low listening levels, and rates it very highly overall: “rhythmic, dynamically impressive, pure, and transparent.” Very mellow balance, however, may be a problem in some systems. High impedance can result in terminal hum problems in some systems—try before you buy. (Vol.15 No.11, Vol.16 Nos.3 & 5)

van den Hul D-102 Mk.III:
$141.11/1m pair terminated w/RCA plugs
Excellent treble, but image focus not as good. A JE recommendation. Latest version has different jacket color and refined metalwork, but is otherwise identical. (NR)

XLO Type 1: $200/1m pair plus $75 termination
JE found that, in the right system, XLO’s Type 1 can sound marvelous, with an improved sense of dynamic contrasts. Soundstaging is a little flattened, however, compared with Cardas and Magnan Vi. (Vol.15 No.12)

XLO Type 4: $150/1m, $50 additional 0.5m LL’s reference: “Very transparent, slightly smooth, harmonically honest.” (NR)

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Straight Wire Virtuoso, WireWorld Eclipse, Discovery interconnect, Mapleshade Electronics Omega
Mikro solid-core.
Deletions
MIT M-330 CVT Plus Terminator now too expensive for sound quality.

LOUDSPEAKER CABLES
Acrotec 6N-S1030: $19/m ☆
This “six-nines” pure-copper cable is recommended by DO as good value for money. The strong bass and low-level detail resolution are exemplary. LL feels it's clearly the best speaker cable he's heard. (NR)

AudioQuest F14: 95/ft ☆ $$$
Inexpensive flat-twin solid-core cable that RH enthusiastically recommends as excellent value for money. (NR)

AudioQuest Type 4: $2.50/ft $$$
"The best cheap speaker cable on the market, and much better-sounding than F14," sez CG. "Try this stuff before laying down long green for expensive cables." (NR)

AudioTruth (AudioQuest) Clear Hyperlitz: $1395/10' pair terminated, $1135/8' pair terminated (most common length) ☆
Very expensive, but solid bass reproduction with a clear (hal), open midband and treble. Can sound rather lightweight in some systems, but almost defines the term "neutrality," says JA. Uses “6N”-pure copper bundles in a complex lay that brings every conductor to the surface to the same extent. (NR)

AudioTruth (AudioQuest) Midnight Hyperlitz: $325/10' pair
Almost as good as Clear at a much lower price. (NR)

AudioTruth (AudioQuest) Sterling: $2095/10' pair terminated, $1695/8' pair terminated ☆

AudioTruth (AudioQuest) Dragon: $3529/10' pair terminated, $2895/8' pair terminated ☆
Two silver-conducted speaker cables that are maximally smooth and transparent, according to RH and JA. JA also finds the powerful bass performance of Sterling to be its strongest suit. (NR)

Audio Research Litzline 2: $520/1m pair, $640/3m pair
JE found this under-promoted speaker cable to perform well in a diverse variety of systems, working especially well with ARC's own amplifiers. (NR)

Cardas Hexlink Golden Five C: $840/1m pair, $1360/10' pair ☆
Very similar in character to the Cardas interconnect. A JE reference cable. (Vol.15 No.12)

Dunlavy Audio Labs DAL-8Z: $200/8' pair
An inexpensive cable that SS recommends highly. While it doesn't warm up or harmonically richen a speaker's sound, neither does it emulate or whiten it, he notes. A nice ergonomic touch is the use of interchangeable screw-in terminations (optional, $25/set of 4). (NR)

Kimber 4AG: $100/ft ☆
An expensive hyper-pure silver cable that can offer a glimpse of audio heaven. Significant system sensitivity, points out DO, so be sure to check for compatibility before you buy. (NR)

Kimber 4TC: $5/ft ☆ $$$
Kimber 8TC: $9/ft ☆ $$$
A double run of 8TC greatly improves the sound, feels DO. Excellent bass. (NR)

Kimber 4PR: $1/ft ☆ $$$
Least-expensive cable from Kimber was found to have good bass, but a "zippy" treble and poor soundstage, according to DO. With inexpensive amplifiers, however, its good RF rejection, compared with zipcord or spaced-pair types, will often result in a better sound. (NR)

Monster Cable MS2 Sigma: $1000/12' pair terminated, $750/8' pair terminated ☆
Excellent detail, attack, and delineation of space, found AB. Not as transparent as XLO Type S, but takes the honors for presence, pace, and harmonic integrity. (NR)

Monster Cable M1.5: $285/5' pair; $400/8' pair; $600/15' pair; $1000/25' pair; spade-terminated TJN recommends this inherently lean-sounding speaker cable for use in over-warm systems. (NR)

Naim NACAS5: $12.95/ft ☆ $$$
Inexpensive cable that ST found to work well with the Spendor S100 loudspeaker. Worth investigating as a good-value cable, thinks JA. (NR)

NBS Signature: $900/3' pair
JE's reference. (Vol.16 No.11)

Ocos cable: $8/ft plus $75/pair termination $$$
Distributed by Sumiko, this idiosyncratic cable was found by LG to have a speed and clarity he hadn't heard from other cables. He found the bass to be a little lightweight, but votes it a "three-star" design. (NR)

Purist Audio Colossus: $1180/1.5m pair, $200 each additional 0.5m
The famed “water” cable with a fluid-filled insulating jacket. AB found "resoundingly open staging with a remarkably distinct lower-midrange/upper-bass presentation which lends music a great sense of pace." (NR)

Radio Shack 18-gauge solid-core hookup wire: 7'/ft, $3.99/60' spool ☆ $$$
Ridiculously cheap way of connecting speakers, yet ST reports that this cable is okay sonically. You have to choose for yourself whether to space or twist a pair for best sound (or even whether to double up the runs for less series impedance). (NR)

Siltech FT-12: $595/first meter w/spades, $520/additional meter
MC's reference cable, but high inductance mandates careful amplifier choice. (NR)

Straight Wire Maestro II: $560/8' pair w/gold spade lugs or pins; $30/additional foot ☆
The cable that LA found to work best between the Krell KSA-250 and Thiel C5Ss. (NR)

SYMO LSSXS: $30/ft w/gold-plated spade connectors ☆
Distributed by Apogee Acoustics, this relatively inexpensive cable works well with, you guessed it, Apogees. TJN's reference for use with the Stages. (NR)

TARA Labs Space & Time Rectangular Solid Core "Master" Generation 2: $45/ft plus $90 termination
RD found that these cables have wonderful lucidity and a top-to-bottom coherence that's truly heavenly: "The Almighty sure knows His cables." AB found it to have an endearing smoothness, "but without obvious loss of detail due to softness." DO's favorite speaker cable: "Quite spectacular in its resolution of
spatial information," he says. The latest Generation 2 has greater top-end air and is more flexible, notes RD.  

(OK)

TARA Labs Space & Time Phase II: $6.95/ft  $5$5$5$5

Featuring twisted solid-core construction and "Australian copper," this inexpensive cable is DO's workhorse speaker cable. (Vol.11 No.3)

Transparent Audio Music Wave Reference: $3700/4' pair, $3900/8' pair, $4100/10' pair, $4300/12' pair; spade-terminated

Hedonistically expensive, notes WP, but this speaker cable is the most uncolored he's tried. More importantly, it's fundamentally better at resolving the timing involved in music—not just at the level of overtones relating to the fundamentals, but also at the global harmonic/melodic level. (NR)

van den Hul Revelation: $873/2m pair, $1495/4m pair

The best speaker cable MC has used at any price. (Vol.16 No.5)

XLO Type 5: $55/ft, plus $100 termination

"This is the real gem of the XLO line,"—JE. "Very transparent and detailed"—AB. Perhaps a touch of midrange prominence makes it less suitable for speakers that are already balanced too forward in this region. Not as expansive as TARA RSC or Monster Sigma; works well with tube amps. (Vol.15 No.12)

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Straight Wire Virtuoso, WireWorld Eclipse.

Deletions

MIT MH-750 CVT Plus Shotgun Terminator now too expensive for sound quality offered.

DIGITAL DATA INTERCONNECTS

Editor's Note: Extensive auditioning by RH suggests that all the coaxial data cables listed below are better than conventional, TosLink-fitted, plastic fiber optic cables, which in general don't give as tight a bass or as focused a soundstage. "You don't get that essential sharpness of image outlines, the sound becomes more homogenized," quoth he, which is why we no longer recommend any of the TosLink interconnects. JA feels that coaxial interconnects generally fall short of the sonic standard set by the "AT&T ST optical data connection. He also points out that the specific character of any particular cable will depend heavily on the processor and it connects.

Acrotec D5010 digital datalink: $200/1m

Mapleshade/Insound Omega Mikro digital datalink: $295/1m

The Acrotec and Mapleshade cables join the Ensemble Digitalflex 75 as the absolute best datalinks DO had auditioned as of early '94 in his Theta-based CD playback system. System-dependent factors, however, dictate careful auditioning of any datalink. (NR)

Alitis Altitame Glass Fiber: $150/1m, $55 each additional 0.5m

"Poor stars," says JE of this ST-type datalink, finding it endowed his Mark Levinson–based system with a wide, deep soundstage and a smoothly liquid midrange. (Vol.16 No.11)

Audio Alchemy Data Stream Transceiver digital datalink: $259

Although it comes as standard with 1m of interconnect, the neatest thing about the active DST, notes SS, is that it can drive almost any length of cable. You want the transport at your listening chair and the D/A in the rack: the DST will be there for you. The best way to convert a laserdisc player's TosLink output to coaxial or AES/EBU, he adds. ST found that it significantly cleaned up the sound of his digital playback system. (Vol.17 No.7)

AudioTruth (AudioQuest) OptiLink Pro 2: $295/1m w/AT&T-ST termination

Expensive ST datalink that JA and JE recommend highly. Excellent bass performance, with power, clarity, and dynamic contrast, says JE. A more rich sound than the Alitis ST link. ST terminations can be fragile, adds JA. (Vol.16 No.11)

AudioQuest Digital Pro:

$150/1m single cable w/welded RCA plugs

An excellent coaxial datalink, though a little behind the Kimber KCAG in absolute terms. DO feels it sounds a little forward. (Vol.16 No.11)

AudioQuest Video Z:

$79/1m single cable w/welded RCA plugs $8

RH felt that the tonal balance was tilted upward in the treble, while midrange textures were less velvety-smooth than some of the other data cables, with a softened soundstage focus. DO found this relatively inexpensive cable to work well with the Bitwise One D/A, though warns that its soundstage is somewhat veiled compared with AudioQuest's Digital Pro. (Vol.16 No.11)

Aural Symphonics Digital Standard:

$195/1m, $292.50/1.5m single cable $9

Neutrik RCA connectors with a sliding shield make ground before signal connection. Vivid and forward rendering, with sharp soundstage focus. (NR)

Cardas 300-B Micro digital datalink: $57.95/1m

"A natural and detailed sound," found DO in his Theta-based system, with excellent imaging. (Vol.16 No.11)

Ensemble Digitalflex 75:

$210/1m with RCA or BNC connectors

"Positively the best-sounding 75 ohm digital interconnect I've found," DO writes. Smooth, good focus, and harmonically correct. "A digital link that does it all, from top to bottom, without skimping on focus or harmonic integrity," he summed up. (Vol.16 No.11)

HAVE (Canaire) DigiFlex Gold T 75 ohm Digital Interconnect Cable: $39.95/3' $8

Before you try any of the expensive coaxial links, you should try this inexpensive, true 75 ohm cable, advises CG, who rates it as his first choice in a digital cable at any price, even preferring it to the Kimber AGDL. (Vol.16 No.7)

Kimber AGDL DigitalLink:

$175/1m w/ RCA or XLR termination

Best coaxial datalink ST had tried until he heard the expensive Goldmund. JE found it to excel in the retrieval of detail, while it also featured an extended and powerful bass. (Vol.15 Nos.2 & 6; see also CG's HAVE/Canaire review in Vol.16 No.7)

Madrigal MDC-1 AES/EBU balanced digital datalink: $285/1m

Excellent soundstaging and image focus, reported JE, when used between the Mark Levinson Nos.30 & 31,
as well as an open-sounding, extended treble. JA concurs. (Vol.16 No.11)
The Mod Squad WonderLink Digital I: $195/0.5m, $225/1m single cable, $275 balanced • Exceptionally transparent presentation, thought JA, with excellent soundstage depth and natural midrange. Clunky gold-plated RCA plugs are actually old-fashioned RF connectors with RCA and BNC adaptors. (NR)
NBS Signature AES/EBU balanced digital datalink: $600/1m
“A midrange with a magical combination of body and clarity,” JE found in his Mark Levinson system, though not as much clarity as the AudioQuest OptiLink (Vol.16 No.11)
TARA Labs Space & Time Digital Reference: $195/1m terminated • Laid-back, relaxed presentation, excellent resolution of soundstage depth. Smooth treble adds to pleasing analog-like warmth. Silver-plated RCA plugs slightly undersized, making connection difficult. (NR)
TARA Labs RSC Digital Generation 2: $295/1m Very stiff and awkward to handle, notes RD, but it does sound exceptionally transparent, especially in AES/EBU form between his PS Audio transport and processor. RH also recommends it highly. Current version is less stiff than its predecessor. (NR)
vand den Hul D-102 Mk.III interconnect: $141.11/1m pair terminated
Although not specifically intended for use as a datalink, JE found this interconnect to be useful in systems that are too bright overall, too forward. (Vol.15 No.2)
XLO Type 4 Reference Series digital interconnect: $150/1m, $50 additional 0.5m
JE found this unshielded cable to excel in soundstage presentation, while being warmer and fuller than the Kimber AGDL. “The best digital cable I have yet heard in re-creating a believable soundstage with layers upon layers of width and depth, ample ambience, and pin-point localization,” he announced. (Vol.15 No.2)
K Mod Squad Wonderlink II, Illuminati datalink.

Books & Computer Software

CALSOD loudspeaker system optimization program, version 3.00: $269 w/on-disc manual (51/4" or 31/2" disks) • User entered measured drive-unit response, impedance and sensitivity, and target response; program designs appropriate crossover filter networks. Latest version handles double-ported bandpass enclosures, and can calculate the effects of LF room gain, enclosure leakage and absorption losses in sealed-box, vented-box, passive-radiator, and bandpass systems. Thiele-Small parameters can be calculated from two impedance measurements, and data can be imported from the IMP PC-based measurement system. Standard 130N version costs $69.95. Available from: Old Colony Sound Lab, P.O. Box 243, Peterborough, NH 03458. Tel: (603) 924-5626. Fax: (603) 924-9467. (Vol.13 No.11)
LEAP 4.5 Loudspeaker Enclosure Analysis Program: $395/$1195 • Highly recommended by DO and much used by professional designers, LEAP imports raw drive-unit data (it accepts Audio Precision and MLSSA files as well as data produced by Audio Techno’s own LMS system) and optimizes a speaker system’s crossover network to meet the user’s target specifications, either on- or off-axis. (It also averages responses to give a speaker’s power response.) The fully loaded LEAP 4.5, which includes a SPICE-type passive network analyzer and an Active Filter Library, costs $1195; a basic version, to which modular upgrades can be made (each one is $175), costs $395. Available from LINEARX Systems, Inc., 7556 SW Bridgeport Road, Portland, OR 97224. Tel: (503) 620-3044. Fax: (503) 598-9258. (Vol.13 No.11)
The Listening Room: $47.50 • Inexpensive but excellent computer program for PCs and Macs that allows an audiophile to move simulated loudspeakers and a simulated listening seat around a simulation of his or her room (in three dimensions) to find the position that gives optimal performance below 200Hz or so. The suggestions made by TJN in his review have been incorporated in the latest version, which can also store different setups as separate files. Upgrades are available for $15, inc. postage. The Macintosh version ($6750) requires 1Mb RAM and allows local optimization of listener and/or speaker positions. It also models the woofer’s LF limit and slope. Available from Sitting Duck Software, P.O. Box 130, Veneta, OR 97487. Tel: (503) 935-3982. (Vol.13 No.12)
SPEAK loudspeaker design program: $395
DOS program effectively calculates loudspeaker low-frequency performance—frequency response, impedance, excursion, even pipe resonances—for sealed-box, reflex, and even transmission-line alignments. Available from DLC Design, 24166 Hagberry Road, Farmington Hills, MI 48335. Tel: (313) 477-7930. (Vol.16 No.3)
The Complete Guide to High-end Audio: $29.95 (softcover) plus $4.95 S&H
Written by one of Stereophile’s two consulting technical editors, Robert Harley, The Complete Guide to High-end Audio offers lucid explanations of how to listen critically, to optimally set up your system, and to get the best sound for your buck. Not coincidentally, it will also give you all the background and technical information to be able to get the most from reading Stereophile. Deluxe, signed hardcover edition costs $39.95 plus $4.95 S&H. Available from Acapella Publishing, P.O. Box 80805, Albuquerque, NM 87198-0805. Tel: (800) 848-5099.
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