

way houses, and quickly closed shows.

Criticism is partly responsible because it is the nature of critics (and our obligation) to judge the result rather than examine the process. In so doing, however, we must recognize how much we contribute to the unnatural state of affairs that now prevails in the theater. By acting as guides to consumers rather than as analysts of an art form, we invariably tend to treat theater productions as marketable commodities, significant only when they have the potential to be appreciated by a larger ticket-buying public. By scouting out shows that might have larger market value, we let our "standards" become instruments of a quasi-commercial

transaction. And by encouraging productions to move intact from out-of-town venues to New York, we inadvertently restrict the diversity of theater and limit its possibilities.

Critics should recognize that not only does the American theater profit from diversity, but so does American society at large, that all roads do not necessarily lead to Rome, but rather to interesting pockets of culture in many cities of the nation. What seems to me really parochial and provincial is the assumption that art is not properly validated until and unless it is shown in New York, for this both denies the existence of a really vigorous national culture and, in some odd way, eats into the possibilities of a

healthy New York culture too. Walt Whitman once said, "You don't go to New York to grow fruit, you go there to sell it." He was affirming that the nurturing process necessary to all great art is not possible under the harsh glare of a result-oriented marketplace. New York now has some significant nurturing gardens for the theater arts and will no doubt develop more in the future. But the Broadway fruit markets that now stand empty and abandoned, the produce rotting on the marquees, will flourish again only when our cultural mediators recognize that growth can be an important end in itself, and not just an impatient stage on the way to consumption.

The myth of the CD and the miracle of the LP.

THE QUEST FOR PERFECT SOUND

BY EDWARD ROTHSTEIN

*Today for reproduction
I'm as eager as can be;
Count me among the faithful fans
Of High Fi-De-Li-Ty.
—"The Song of Reproduction"
by Flanders and Swann
from At the Drop of a Hat (1959)*

As I write these words, I am listening to a \$12.98 record played through about \$15,000 worth of audio equipment. That decimal point is not misplaced. The turntable, made by SOTA of polished koa wood, weighs more than 40 pounds and has a vacuum pump that pulls the record down onto a specially designed mat made of acrylic. The \$1,200 tone-arm is hand-machined according to a design by David Fletcher, and is so definitive that it has been called, simply, "The Arm." The cartridge, which alone costs more than most rack systems bought in department stores and discount audio salons, is carved from rosewood by Koetsu. The cables that pass the refined signals to the amplifying electronics, made by a company called Monster Cable, contain numerous strands and twists meticulously arranged according to the results of years of research, and cost about \$80 for a one-meter pair. There is a solid-state

preamplifier, made with exquisite care without any integrated circuits by Mark Levinson; an amplifier using seemingly old-fashioned vacuum tubes made by a company with a lowercase name but high-cost and high-quality products, conrad-johnson; and two speakers, made by Magnepan, that are about six feet tall and an inch-and-a-half deep, and are constructed of vibrating ribbons.

Everything sounds extraordinarily good, but not quite good enough. I am, you see, a convert to what has been called the "High End," and though almost all of this equipment has been borrowed, once one has entered into this world of extraordinarily reproduced music, there is no turning back. It is a dance of seven veils, but there is always another one to lift; each sonic revelation shows how much remains. And somewhere, at the unreachable end of this passage into technological reproduction, there is something very humble, simple, and unremarkable: the sound of a man playing the harpsichord, a woman singing Schubert, an orchestra playing in Carnegie Hall.

The endless quest for what is, after all, so easily apprehended in the con-

cert hall is at the heart of the High End. It is a world of the audio equipment few of us have ever heard and fewer could afford. The companies are not Sony and Panasonic and Hitachi but Audio Research and Linn Sondek and VPI and PS Audio and Infinity. Sales are measured in hundreds of units rather than in hundreds of thousands. There are turntables that cost well over \$10,000, and speaker systems that cost more than \$40,000; there are \$10,000 amplifiers that can seem to act as room heaters as well as music generators; there are record clamps that press a recording down to a mat, electronic stylus cleaners that vibrate the grunge off what used to be called a needle, bricks of steel wrapped in wood that are meant to be placed over an amplifier's transformers, hypodermic needles full of a fluid that increases metal conductivity to be applied by the droplet to all connectors, meters to determine which way a plug should be put into a socket, pointed metal cones to rest speakers on.

There are purists who believe that having a telephone in the room with a system can affect its sound and that a television in the same room should not just be turned off, but

should have the dial moved between channels. There are eccentric designers, one of whom goes so far as to include a diaper with his amplifier, because of the sound's supposed dramatic impact on muscle control. There are also brilliant designers who have come from other professions—physics, economics—inspired by a passion for perfecting sound. And there are special journals that discuss this equipment as if it were a fine wine, sipping from sonic riches, commenting on flavor and

coloration, dimensionality and body.

The High End can be, at worst, another form of conspicuous consumption, in which wealthy hobbyists spar with speaker cables and sapphire styli. But this is not a refuge just for the indulgent rich. There are ways into the High End for a few thousand dollars. And it may have begun to attract even those who must look only from afar. The most brilliant and influential journal of the High End, *The Absolute Sound*, has a circulation of over 20,000 and is

still growing. We are living in a period of immense technological change in recordings—like the 1930s and 1950s—largely because of the advent of digital recording in 1978 and the digital compact disc in 1983. These new technologies have focused the attention of millions on the quality of sound being heard. This has caused the High End itself to become better known; despite its esoteric character, it has had an often polemical effect on the world of commercial music. Some of the most articulate High End circles have attacked the very technological advances it would seem they would have welcomed, rejecting the compact disc for the long-playing record, solid-state electronics for vacuum tubes, contemporary recordings for those made in the 1950s. The High End is partly a Romance, a quest for something beyond the reach of any equipment—the live music itself. That quest means using technology to overcome itself, making it invisible at the very moment of its greatest achievement.

I have spent several months in a state of audiophilia learning how to listen to this equipment, on loan from manufacturers, distributors, and dealers—switching turntables, preamplifiers, amplifiers, cables, recordings and remastered recordings, compact disc players, tape machines—playing and playing with more equipment than I will ever be able to buy, attempting to take its measure. I heard a system that may be one of the world's best, costing perhaps \$90,000, and listened, too, for one I would be able to afford. The more I heard, the more I was entranced; the more entranced, the more I was puzzled. What is the nature of this drive for "high fidelity" in sound? What are the differences in qualities of sound? What does all this do for music? And what implications does it have for the way in which we listen?

THE HISTORY

*I had a little gramophone
I'd wind it round and round
And with a sharpish needle
It made a cheerful sound.*

—"The Song of Reproduction"

The urge to reproduce music must be as old as the urge to make it. According to *From Tin Foil to Stereo*, a staggeringly detailed history of the phonograph by Oliver Read and Walter L. Welch, the earliest attempt to reproduce a voice was

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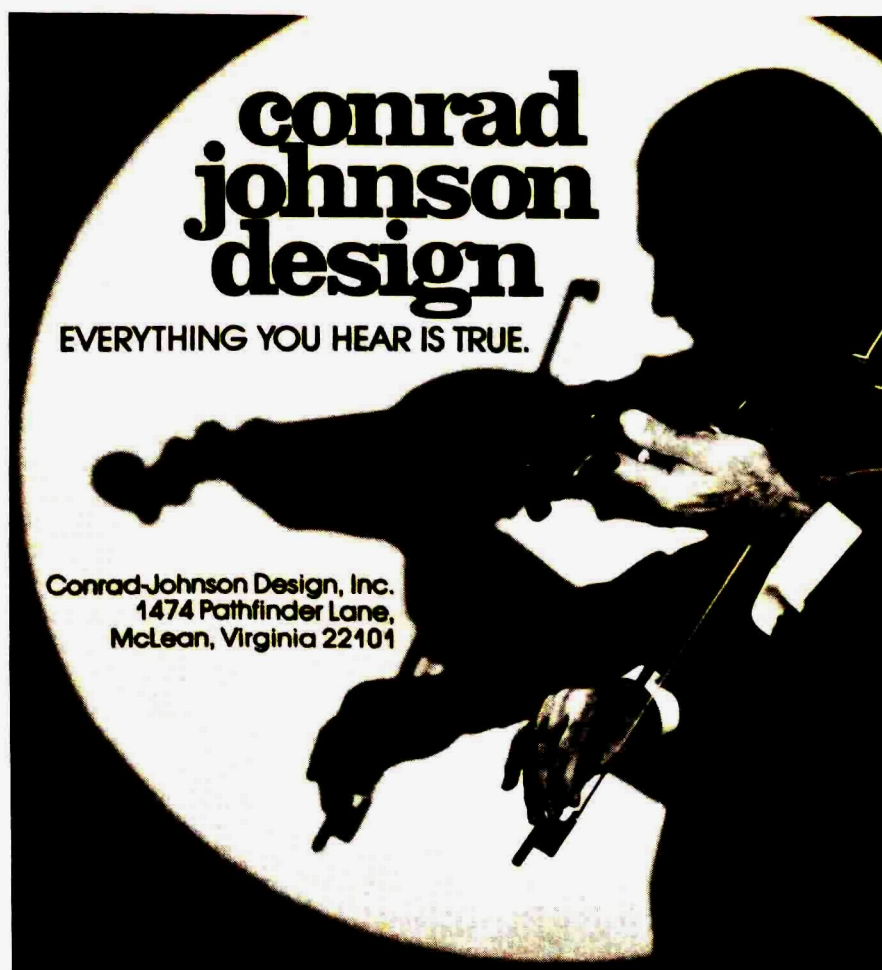
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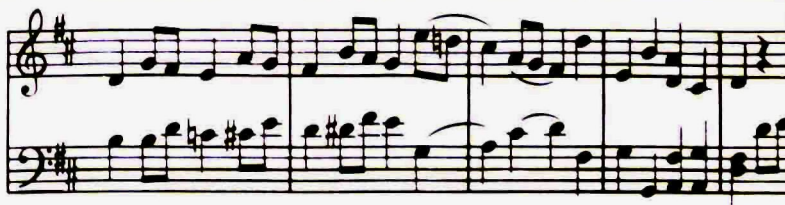
The phonograph wrested the voice and its music from oblivion. The latent power in the humble turning cylinder was the focus of business warfare, litigation, espionage, contention over patents, formats, market rights, and investments. What seemed at first to Edison little more than a business and dictating machine became much more. By the First World War, special public concerts began to combine live singers with recordings. A singer might sing in unison with a recording played on an acoustic phonograph fitted with an enormous horn, stopping from time to time to let the machine be heard, accompanied by gasps from the audience. "The most sensitive ear," read a London report of one such recital by Hardy Williamson, "could not detect the slightest difference between the tone of the singer and the tone of the mechanical device."



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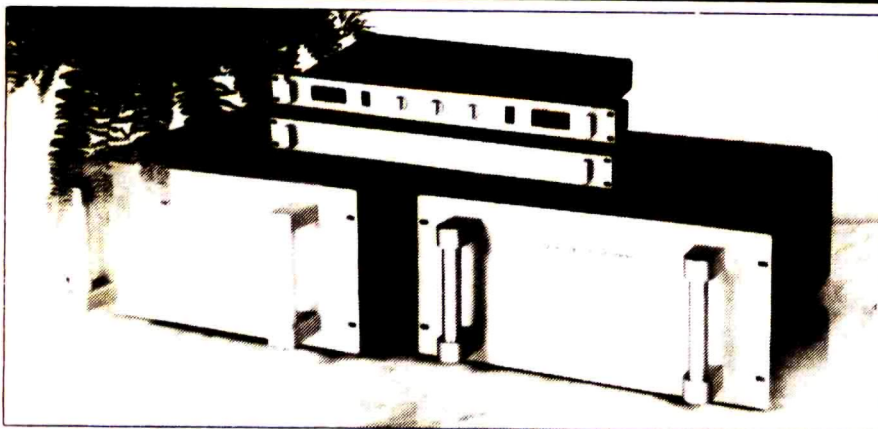
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The Absolute Sound, No. 34 (Summer '84)

Issue 39 Is Out

The second American audio revolution: Transparency (HP reports) Special Digital Supplement: The lowdown on CD players, why they are so bad and what the new generation of High End players will do to make them better; the strengths and weaknesses of digital sound, finally, an explanation of digital you can understand, one that tells you why it can really be better than analogue and why, for now, it isn't, the economics of digital and how the big boys are using it to eliminate the small companies that still make good-sounding recordings. J. Gordon Holt reviews *Church Windows*; Tom Miller reviews arms, including the dazzling Eminent Technology II, the high tech Luminescence preamp; a showdown between the highly touted Meridian and Mission CD players, the classic Mercury Living Presences and so much more that we can't fit into this ad.

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The impulse for realism and accuracy was so strong that Edison, partly deaf in his later years, used to bite into the cabinet of a phonograph to try to sense through the vibrations of his bones whether each instrument in an ensemble was being properly recorded. There were debates then, as now, about accuracy, about how and whether room acoustics could be captured, about the format of recordings. Original records were made on cylinders that proved fragile; the flat disc won out, though it involved a compromise in quality.

A half-century ago, *Gramophone* had this to say about audio devotees:

In those days [of acoustic recordings] battle raged between two schools of opinion, who called themselves, respectively, Realists and Romantics. The Realists stood out strongly for as accurate a reproduction as possible of the actual sounds recorded, but the Romantics held that a certain sacrifice of accuracy was permissible, nay, even desirable, if it induced a quality more pleasing to the ear. To a Romantic, realistic records were always "shrill" or "thin" or both. To a Realist, a romantic record would appear "woolly" or "foggy." . . . With the advent of the electrical recording process of recording, it may be said that the dispute ended. The Romantics were drummed off the battlefield.

The same distinction remains, even today, played out in debates over equipment and recording.

I HAVE an old Victrola XA, a cabinet record player that sold in 1917 for \$85, and occasionally I will turn the crank on the side, put a new steel needle into the weighty arm, set the speed control, and play a record from the period, listening through the sound of metal pulled through a worn groove of plastic. Under the whirl and spits of interference of these shellac discs, the "familiar voices of the dead" do indeed come to life. But not even the most untrained ear could confuse this sound with the live sound of music. How, then, could people at the time be struck with the realism of the sound, and discern the ambience of the room, the position of the artists, and even in certain cases, the dimensions of the recorded ensemble? It would seem there is a language of recording learned; the listener translates, mapping the heard sounds into a real world, placing the distorted frequencies into a mouth or instrument, and reconstructing sound and its inten-

tion. The cues are subtle, but they can be relearned. It is possible to listen through the veils, as if peering through a smudged window, to discern the music beyond.

THROUGHOUT the history of recording, nothing remained steady for very long. The quality of that image changed substantially, for example, with the advent of electrical amplification. Musical reproduction until then was purely mechanical and acoustic. A sound caused a vibration that was etched in a disc, which was in turn traced to re-create the vibration and then the sound. With amplification, the mechanical energy had to be transformed into electrical energy, amplified, and then transformed back again. In 1935 the editor of *Gramophone* in England, Compton Mackenzie, wrote:

Of one thing only am I completely certain at this moment, which is that the really passionate devotee of the gramophone for a long time to come will get more pleasure out of his instrument if it is acoustical, and I am even going to add hand-wound, than if it is electrical. This is not a question of sour grapes. I challenge any reader who possesses the finest electrical gramophone to capture the spirit of music as successfully as the owner of a Mark Xb, an Expert Senior or a Cascade.

The "spirit of music" undergoes still greater modification with time, with Mackenzie's reaction reappearing again and again—sometimes with justice, sometimes without. But with each transformation the language of hearing shifts slightly, until the ear becomes used to more radical processing of sound. By the 1950s, long-playing records had become the norm, following a "war of the speeds" between Columbia, which produced records at 33 1/3 rpm, and RCA, which pushed for 45 rpm. Apart from stereo itself, there also developed conventions of processing sound, including an automatic distortion at the point of cutting the record ("the RIAA curve"), meant to be undone at the time of playback. Recordings were not to be simply authentically made, but a product made to sound "good." The manipulation of sound itself became a convention in the recording industry. For example, when recordings were made in the early days of stereo in the late 1950s and early 1960s, generally three microphones were used, and were fixed in place and amplitude; with the increased "sophis-

tication" of recordings, it became customary by the late 1960s to use even dozens of microphones over an orchestra with the engineer "mixing" the sound to bring out a solo line or bring down the brass.

The 1950s saw the beginning of a refined "hi-fi" market, often with devotees building their own amplifiers and speakers and component systems. During the last two decades there were two contradictory developments in both equipment and recordings as "hi-fi" became popular. First, in equipment, the Japanese rose to prominence in mass manufacture, with components dropping radically in price as they rose in availability; but at the same time, partly in response, the "High End" began to develop. Similar contrasts have developed in recording techniques and the compact disc player were the culmination of a decade of various attempts to improve sound on discs for the mass market; at the same time, a few engineers attempted to perfect the traditional analogue recording, even by returning to microphone techniques and vacuum tube equipment used 30 years ago.

THE RECORDINGS

Perfect Sound, Forever—Philips advertisement for the digital compact disc.

It's the greatest step backward in the history of audio—Doug Sax, recording engineer for Sheffield Labs, on digital recording.

I don't think the High End can be fully understood without attention to what is now crudely called the "software"—the recordings themselves. Until 1978 the basic approach for all the processing of sound on records was the same as that used by Edison a century earlier. The grooves of the record contained minute wave forms that were "analogues" to the wave forms produced in air by the sound. The record was a physical map of physical waves. The magnetic master tape from which this record was made was simply an intermediate step by which intensities and tones could be easily manipulated.

But in 1978 digital recording became practicable. It changes the wave form into a series of numbers, each number specifying a sonic "location" of some kind. Because a wave is continuous, digital recording involves "sampling" the wave at regular intervals, as if a stroboscopic camera were taking its pic-

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ture. If the strobe were fast enough, the wave would seem continuous. A piece of music is then completely coded in the form of numbers. One apparent advantage is that a performance can be permanently fixed, not subject to decay: a copy of a tape is presumably equivalent to the original, since it contains only a finite and immutable array of numbers, simply reproducible. This digital information is then converted back to analogue and used to create standard recordings.

The advent of the compact disc meant that everything could remain digital up until the final electronic stage; there

was no need to translate the numbers back into wave forms of vinyl. The numbers are coded in binary on/off fashion as pits on a 4.7 inch silvery disc. The pits are read by a laser light and a detector. The result has been thought by many to be the absolute sound, the evolutionary culmination of a century of recordings.

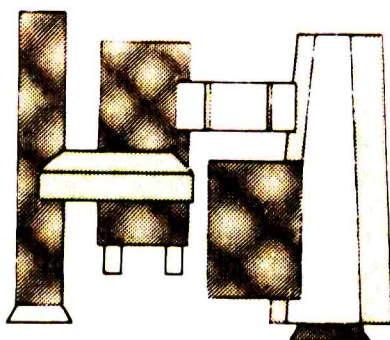
In 1983, when the disc was introduced in the United States at a retail price of close to \$20, there were 1.5 million sold and 35,000 players sold at prices of close to \$1,000. In 1984 there were 4.5 million discs and a quarter million players sold (worldwide the figures

were 17 million discs and 900,000 players). This year's domestic sales are expected to be well over 10.5 million players, with many players priced below \$300 and some discs below ten dollars. Polygram, the recording company that owns London, Deutsche Grammophon, and Philips records, now gets more than half its revenue from the compact disc. At Tower Records' Washington store, the sale of compact discs accounts for as much as a third of its overall sales. At record stores all over, the racks of LPs are steadily decreasing as CDs (as they are called) expand their territory. LP sales have been declining from \$2.473 billion in 1978 to \$1.69 billion in 1983. Recordings by the major companies, in the meantime, have become exclusively digital in their initial processing. What has happened is nothing less than a revolution in the format of recorded sound.

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SOUND
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THE VIRTUES of the compact disc are clear to all. It holds more than 70 minutes of continuously playable sound; it is relatively impervious to dirt and scratches and completely impervious to wear; it contains no tape hiss (if digitally recorded) and no background noise; it is immensely convenient. In the mainstream audio press and daily newspapers, the disc has been welcomed unambiguously for its remarkable sound. Digital recordings have been hailed as the next best thing, originally priced higher than ordinary records, manufactured with more care. Speakers are now being hailed as "digital ready" because they can "handle" the superior dynamic range of compact discs; more powerful amplifiers are selling as well. This interest in quality of sound would seem to fit quite well with the focus and devotion of the High End.

But the result is a shift far greater, and more ambiguous, than that from acoustic to electric that disturbed Mr. Mackenzie so much in 1936. In a perceptive column in the November 1985 issue of *Audio*, Ivan Davis summarized the philosophical differences between digital and analogue recordings. Analogue builds models, he points out, "on the optimistic assumption that our modeling technology is infinitely perfectible." The object in traditional recording was to get the grooves in the record to be as close an analogue as possible to the physical waves hitting the microphone, and then to get the

playback mechanism to re-create the original. Digital, on the other hand, chooses a level of perfection—the sampling rate—"not approximating perfection but perfecting our approximations." Analogue is a hyperbola, ever straining at the final goal. Digital jumps to progress; "the only way to raise our current technology's limits would be to come up with an entirely new digital system." Digital has chosen a "format" that limits both the information and its potential. This leads, Mr. Davis suggests, to a frustration in the audiophile used to coming ever closer to the perfection of live music. In some way, digital undercuts the infinite desire of the High End. Does it, then, displace it?

THE PROBLEM is not merely philosophical. After months of listening, *I have not heard a single compact disc that sounds as good as the identical recording.* I have heard discs from every major label (and some minor ones)—CBS, Philips, London, Deutsche Grammophon, Chandos, Proprius, RCA, Reference Recordings, Nonesuch, Angel, Erato, Orfeo, A&M. I have listened to chamber works and opera, orchestral blockbusters and solo piano music. I have heard digitally recorded material, and CDs of old analogue classics—including CDs of performances of Reiner and the Chicago Symphony and the Beethoven cello sonatas played by Rostropovich and Richter. I have also listened to the discs on two superior latest-generation players—the Nakemichi OMS-5 and what may be one of the best players made today, the Meridian Pro-MCD.

In some cases, the differences are shocking. A recording can be rich with detail and nuance, while the CD sounds musically raw and untamed, like a recounting of the same musical event by someone with a strong voice but slightly bad hearing. Details are lost even though firmness of pitch and frequency response are heightened. In other cases the differences are more subtle. Out of the silent background of the CD can come some impressive sonic effects, which because of the silence become still more finely etched; the record may sacrifice that silence, but places the players in a real room rather than against a black velvet curtain. The CD is an immediate, instantaneously impressive achievement, but it cannot be lived with in a sustained musical fashion. In a sound system of sufficient resolution, CDs end up sounding not like perfect

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sound, but like perfectly unreal sound. They begin to gnaw at musical sensibilities; one loses the sense of musical gesture, of delicately shaped phrasing, of communication between players. There is no relation, for example, between the sound of a piano on a CD and the real thing; the CD also seems to lose overtones and turns the pungent sound of the piano hammers' impacts into "mellow" marimba tones.

In fact the CD samples sound without fully re-creating it, much as the player piano did with real performance. The mechanical piano was a digital machine: it had perhaps two dozen levels of dynamics and time coded in punched holes on a piano roll. The story is told that Artur Schnabel, unlike many other artists of the period, refused to make piano rolls; if they had 20 levels of dynamics, he said, I have 21. The technological arguments about digital are intricate, but at bottom is the fact that even though our digital system samples sound at more than 44,000 times a second, that is less than the infinite sampling of traditional analogue. And that difference can be heard.

BUT IF the CD is so patently unmusical, then how could the common assumption be so different? The key may be in the "sufficient resolution" of my system—the turntable I have on loan is not the sort one picks up at Crazy Eddie's. In fact, the turntable, arm, and cartridge may be the most important parts of an audio system. When I began to research turntables, I immediately dismissed the idea of spending more than \$500 for one. But at a dealer's store I was played the same record on three different turntables, with the rest of the system identical—a Denon direct-drive turntable, such as might be a standard purchase by a musically serious listener; an AR turntable, which is completely manual and which has audiophile ambitions; and a British turntable I had hardly heard of, a Linn Sondek, which sold with its arm and cartridge for more than \$1,000. Not only did each turntable have its own distinctive sound, but there were radical differences in the musical qualities of the results. The opening clarinet solo of Gershwin's "Rhapsody in Blue," for example, sounded very respectable on the Denon, but there was something awry in the rhythmic fluency of the playing, something I would have ascribed to the performance; moreover, the rising

swoop of the line was bland, innocuous. The AR turntable gave the player and his instrument more body; it sounded like a different recording. But on the Linn table, a musical window was thrown open. The rhythmic play with bar lines, the heady sway of the orchestra (it was an old Leonard Bernstein recording) were almost intoxicating after the relatively washed-out sounds of the other players. The turntable I have had most experience with—the SOTA (an acronym for State Of The Art)—also has a distinctive musicality, engineered by Rodney Herman and David Fletcher, that is different yet again from the Linn.

MERE mechanical equipment, then, can reveal musical qualities rather than just increase something abstract like "high fidelity." The reasons are not obscure. The signals in a record groove are of minute size; a difference of only ten atoms of vinyl can actually be heard. The maximum amplitude of any signal is only 25 microns (millionths of a meter). A turntable must not only rotate at the precise speed, but prevent any of that information from being lost through resonances and damping in the table, the cartridge, or the arm. Just as a well-constructed piano will permit sonic differences to emerge out of nuances of physical movement, the same should be true of a turntable. It is equally clear that the vast majority of turntables being used to play records are not musical instruments. So much information is lost that in listening to a CD player it seems that so much more is gained.

But in comparing a CD player of cheap vintage to a turntable of cheap vintage, there still is a difference in favor of the turntable. We have been educated in the language of a certain kind of recorded sound; mass-market turntables mute strong base, sand down contrasts, make pitch slightly uncertain, roll off high frequencies. In these respects, the CD is clearly superior. Given the reference of ordinary turntables, the CD appears to be "real." We are so taken aback, we become like those amazed concertgoers early in the century who ecstatically proclaimed that the sound of an acoustic gramophone with a large horn was indistinguishable from live music. Meanwhile, the musical elements of the recording, its gestures and nuances, are there even in their pale forms in the sounds coming from the vinyl, but

will never be heard from the CD.

Various High End companies are attempting to create CD players that take musical values seriously, to at least make the most of a format that is simply not intrinsically advanced enough. But the CD was designed as a mass-market phenomenon, to rescue the ailing recording industry. That industry has failed to take seriously enough how much information is on the LP, and how valuable it is. The CD was rushed into production with a sampling rate that is simply not high enough to avoid innumerable sonic problems. Skills in using digital techniques have increased greatly since 1978—the early acclaimed recordings are almost unlistenable. But the black vinyl record is still the most sophisticated musical source of recorded sound. It is, however, passing into oblivion before these virtues are fully extracted.

IT HAS BEEN one of the achievements of the High End critics to demonstrate how much musical information is present on recordings made in the 1950s, when the goal was simply to capture what was being played rather than to manufacture it. Early stereophonic recordings on Mercury and RCA, on Archiv and London are rich in both range and precision. They allow the instruments in an orchestra to have a place in space and time, undistorted by an engineer's idea of scoring. There has been some effort made in the best digital recordings by Telarc, for example, to return to earlier recording styles with the new technology. But for the most part, digital recordings are edgy in the high frequencies, giving unrealistic timbre to the woodwinds, and missing the sensuous combination of attack and decay in piano recordings. Audiophile recording labels, such as Wilson Audio, Sheffield Labs, and Reference Recordings, have explicitly rejected digital recording methods, to produce some of the best-sounding records today; unfortunately, on a musical scale they often cannot compete with the performers on the worst recordings.

These failures and achievements in recording technology are, for the most part, invisible on a mass scale, because our hierarchy of musical values in recorded sound has become distorted by the technology. We will pick the values of a hi-fi sound over the values of a real sound. The philosophical purpose of the High End, it would seem, is to both

listen *through* a recording and *to* it—to rescue recorded music from its hi-fi context, by perfecting the way in which we attend to the medium itself.

THE ABSOLUTE SOUND

The Absolute Sound is the sound of unamplified music occurring in real space—

Harry Pearson, editor, *The Absolute Sound*.

There is thus a paradoxical relationship between the High End and music. On the one hand, it requires a sensuous, sometimes fetishistic involvement with the equipment itself. On the other, the ultimate goal of this involvement is the naturalness and ease of real music, the equipment subsumed by its own sounds. The compact disc and digital sound are just case histories in a much larger audio universe; the High End teaches listening by first showing what we have not been hearing.

This is actually a radical stand in a mass-market industry that has come to define itself not through listening but through charts of specifications on distortion, rumble, signal/noise ratio, clipping headroom. Reading the magazines of mass audio—*High Fidelity* and *Stereo Review*—means reading through stilted lab reports of various kinds that measure the technical characteristics of the equipment, devote some time to listening, and come to genial conclusions, using phrases like "a fine little amp," "definitely warrants serious consideration," "a breath of fresh air," and, again and again, "well worth your consideration." Everything is worth considering in these worlds, because it is all thought to sound the same if basic technical standards are met.

But the statistics do not measure the musical quality of the equipment, because they address only parts of the whole. There has been no film or instrument, for example, that is as sensitive to variations in color as the human eye; the hearing of music is no less sophisticated. The "objective" pose of lab reports is a distortion. In the High End, after the technical standards have been met, the emphasis is placed on what is called "subjective"—the sound itself.

Designers of High End equipment and buyers of the equipment must become critical listeners, not just technicians. This is one reason why at the heart of the High End is a journal—*The Absolute Sound*, published and edited by Harry Pearson. Since he began the jour-

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nal in 1973, Pearson, a former environmental writer for *Newsday*, has actually given the industry its name—High End—and helped define its objectives. His incisive analytical skills, wit, and literate style are mixed with a self-acknowledged flakiness and an occasional cultivation of cultishness. He has called the greatest achievement of the journal “the development of [a] meaningful semantic system for describing sound” that has “now proved useful in virtually every other audio magazine.” His goal has been to systematically organize those vague, metaphoric terms that are the only ways we have of communicating nuances of sound.

THIS AFFECTS hearing as well, for once a characteristic of sound has been defined, it is raised to the level of conscious awareness. Pearson has defined, for example, the notion of “soundstage,” in which a finely tuned system succeeds in re-creating the physical presence of music-making in space. Before being articulated, the phenomenon of a three-dimensional world of sound etched in air was not attended to with care; it is now a major preoccupation of equipment design. *The Absolute Sound* has made explicit the extraordinary musical detail and spatial information that is coded on the ordinary record, and has drawn attention to the ways in which it is colored, shaped, textured, and revealed by the elements in the chain of the audio system. In its definitive polemics against CDs and imperfect digital sound, in its rejection of what passes for reviewing in the commercial magazines, in its insistence on unreachable reality, the journal has characterized the Romance of the High End—and changed my own hearing. *The Absolute Sound* is sometimes less balanced than its senior, sober, and often tedious ancestor in the High End world of criticism—*Stereophile*—but it is truer to the industry’s esoteric spirit and goals.

Those goals can be musical, but the esotericism has another aspect. There is a descent into the equipment before there is an ascent into the music. For every pleasure taken in the revelation of a nuance of phrasing and bowing, there is another pleasure taken in the machine. The involvement of audiophiles can sometimes stop at nothing short of fetishism. To properly play a recording, for example, one must first make certain that the vertical tracking angle of

the cartridge is correct, that power lines are not intertwined with signal cables, that a stereo “window” is created through placement of seat and speakers, that connectors are cleaned, etc., etc. One speaker manufacturer, Essence, provides a protractor with its speakers, so that each element can be precisely aligned; some preamplifiers are packed with a screwdriver so that various resistors can be added to the circuitry depending upon what cartridge is being used.

The pleasure is not just in listening, but in seeming to re-create sound, to labor in its service, to refine its beauty. It is surely part of the appeal of vacuum tube amplifiers that they become so seemingly alive, so part of the process of production. The Conrad-Johnson amplifier I am listening to glows with visual as well as sonic warmth, the tubes softly lit in violet and orange as the musical signals pass through them. The craftsmanship of the High End is musical, but also physical.

And metaphysical. In creating what is most ethereal out of what is most mundane, the simplicity of Reality is made most Romantic, because it is achieved entirely through artifice. Ivor

S. Tiefenbrun, the Scottish designer and manager of Linn Products, who over the last decade convinced listeners that turntables make a substantial difference in the sound of recordings, succeeded in tapping the equipments’ latent cultic aura. Linn has given exotic names to its products, like fragments or runes of lost tongues; modifications to its turntable have even been dubbed the Valhalla and the Nirvana.

THE PASSION

They are inescapably and forever damned, a perfectionist elite in sight of an approaching culmination that can never be quite attained—
C. G. Burke, *Saturday Review of Recordings*, July 1950.

The speakers were Infinity Reference Standard, Series III, composed of four towers, each seven feet, six inches tall. The turntable was a Goldmund Reference, French-made, a black miniature pillar of metal and glass on which the platter turned with exquisite ease. The amplifiers—bronze, medallioned French-made vacuum-tubed models by Jadis—were behind me, and the piece of vinyl was Reference Recordings’ release of Berlioz’s *Symphonie Fantastique*

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conducted by Eric Leinsdorf. This audio system in Michael Kay's Lyric Hi-Fi showroom is one of the best in the world, costing perhaps \$90,000. Facing the pillars that rose in the shadowy room like a primitive monument—I heard the music begin. And gasped.

For stripped away at that moment were all the illusions that I had become accustomed to in recorded sound. The equipment simply disappeared. And that disappearance made it clear how much one hears equipment itself, and how much one's imagination actively fills in. The orchestra lay before me as if I were standing on the conductor's podium, the hall rising up, dry-sounding and a bit unattractive, in back and on either side. Each instrument had a physical as well as a musical presence. It frightened because it jarred my habits of listening.

After four years of attending seven concerts a week and reviewing scores of recordings as a critic for the *New York Times*, after six months of attending to the nuances of the sound of audio equipment, attempting to judge it as one would the sound of a finely made string instrument or piano, I was no longer sure what I had been listening to, or how we listen at all. I recall states of musical alertness in which the sound of a Mozart symphony played over a two-inch speaker on a cheap Japanese transistor radio was cause for great pleasure. So little sound is necessary to communicate musical information; intricate structural nuances and references emerge even in a state of distorted artifice. The sound is ugly; the music, beautiful.

Yet here, it was clear how much of that musical experience takes place through the strain of imagining. That strain is the strain we feel in listening to hi-fi equipment, making mental efforts to expand, fill in, complete what remains heard only darkly and dimly. We are not aware of that because we have learned the language of hi-fi so well. That afternoon my sense of that language was undone, and the sound seemed present as at its origin.

I am quite sure that another generation of equipment will reveal to me what veils existed in that brief glimpse through a technical window. Was that oboe, after all, a real oboe? Was the particular way an oboe reed starts to vibrate really captured, or did I simply imagine it there because so much else was appropriate? Did Leinsdorf give

the orchestra that slightly dry character or was that the hall, the cable, the recording, the microphone, the tonearm, the cartridge, the stylus, the speakers, the amplification, the connectors?

But it is still possible to settle for much less. For those of us of humble means, it is comforting perhaps to know that the curve of pleasure is a hyperbola: the first steps are the largest and most significant. It is less of a comfort to know that the later ones, soon enough, become needs. The ears become ever more aware; the music-making is always just out of grasp, because it is always made elsewhere, by someone else.

Here, as my Requiem, are the words of C. G. Burke, writing for the *Saturday Review of Recordings* in the simpler days of July 1950 about the devotees to "high fidelity":

They want exact realism. They want the continuous splendor of the Boston Sym-

phony Orchestra audibly present in their living rooms, indistinguishable from the orchestra in Symphony Hall, without the loss of a single overtone from cymbal or triangle. The great improvements of the last few years—ffrr and microgroove—stimulate a fiercer hunger for glories newer still. . . . Once their zeal has infected others previously contented with the placid issuance of a gentle musical entertainment from a comfy, reassuring phonograph incapable of parading the dazzle of the new records, the neophytes undergo the breathless excitement of discovery and revelation, renewed and renewed again as equipment is discarded and replaced by more elaborate or more accurate components. New values of reproduction are sought and eventually found, bit by bit, after disappointment, exasperation and expense. The original germ of discontent, cultivated, will produce progressively improved blooms, each bearing fertile seeds of untoward dissatisfaction.

Yes, true, true. But just listen.

THE FIRE THIS TIME

The Price of the Ticket: Collected Nonfiction, 1948-1985 by James Baldwin

(St. Martin's/Marek, 704 pp., \$29.95)

The Evidence of Things Not Seen by James Baldwin

(Holt, Rinehart and Winston, 144 pp., \$11.95)

James Baldwin's collected nonfiction, *The Price of the Ticket*, appears simultaneously with his latest work of nonfiction, *The Evidence of Things Not Seen*, a small book on the trial of Wayne Williams, who was suspected of killing many black children and youths in Atlanta but put on trial only for two of these murders, as Baldwin reminds us again and again. It is a strange book. Little in it deals with either Atlanta, or the child killings, or the trial. Baldwin is suspicious of the trial. He does not believe Williams has been proved guilty (neither does Abby Mann, who wrote the television film based on the case), but he tells us so little about the case and the trial that we cannot be very clear about his reasons for thinking so. Most of the book consists of medita-

tions or reflections or jeremiads that may have their origins in the circumstances of the Atlanta child murders and trial, but are familiar to us from Baldwin's other nonfiction.

It is a very hard book to read. What we recall as the icy clarity of Baldwin's prose, the precision of his writing (he loves the word "precisely"), here melts and becomes somewhat muddy. The words are still there, the wonderful quotations from spirituals and blues and the Bible. But all one gets is the rush of anger and despair over the black situation, and what whites have done to make it so.

It was not always like this. Not that the tone of *The Evidence of Things Not Seen* is completely new—one finds the same in much of the writing collected in

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