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PrimaLuna
ProLogue Eight
CD PLAYER

Fred Kaplan & John Atkinson

DESCRIPTION Single-box, fixed-output, remote-control CD player with tubed output stage, SuperTubeClock to minimize jitter, and SoftStart circuit for extended life of tubes. Tube complement: two 5AR4 rectifiers, two 12AX7, two 12AU7, subminiature triode in SuperTubeClock circuit. Analog outputs: 1 pair (RCA). Digital outputs: S/PDIF on coaxial (RCA) and optical (TosLink). Frequency response: 20Hz–20kHz, ±0.5dB. Channel separation: 90dB at 1kHz. Maximum output level: 2V, ±3dB. Signal/noise: >96dB. Dynamic range: 120dB. Distortion and noise: <–70dB. Power consumption: 50W.
DIMENSIONS 15.5" (395mm) D by 11" (280mm) W by 7.5" (190mm) H. Weight: 25.4 lbs (11.5kg).
SERIAL NUMBER OF UNIT REVIEWED 07051211.
PRICE $2495. Approximate number of dealers: 14. Warranty: 2 years, limited to original owner; 6 months on stock vacuum tubes.
MANUFACTURER Durob Audio BV, PO Box 109, 5250 AC Vlijmen, The Netherlands. Web: www.primaluna.nl. US distributor: PrimaLuna USA, 2504 Spring Terrace, Upland, CA 91784. Web: www.primaluna-usa.com.

There's a retro, Heathkit vibe to the curiously capitalized PrimaLuna ProLogue Eight CD player: a shelf of glowing tubes and a chunky transformer case perched atop a plain black chassis. But on closer inspection, it seems there's much more going on here. The chassis is made of heavy-gauge steel, with (according to the manual) a "five-coat, high-gloss, automotive finish," each coating hand-rubbed and -polished. The tube sockets are ceramic, the output jacks gold-plated. Inside, separate toroidal transformers power each channel. Custom-designed isolation transformers separate the analog and digital devices, to reduce noise. The power supply incorporates 11 separate regulation circuits. The output stage is dual-mono with zero feedback. Audio-handling chips include a Burr-Brown SRC4192 that upsamples "Red Book" data to 24-bit/192kHz, and one 24-bit Burr-Brown PCM1792 DAC per channel. Only the tiny silver control buttons (on the otherwise hefty faceplate of machined aluminum) betray a whiff of chintz.

In the early days of CD, a few tube-powered models came on the market; the idea was that the dimensionality and warmth of tubes would drape a cuddly blanket over digital's flat harshness. Digital has come a long way since then, and in any case the tubes in the ProLogue Eight aren't about smoothing over; they are, or purport to be, about greater accuracy. Not only is the Eight powered

by a pair each of 12AX7, 12AU7, and 5AR4 tubes; its internal clocking device is a mini-triode tube instead of the solid-state oscillator found in most CD players. The claim is that a tube clock introduces less noise and jitter into the CD drive and the DAC chip, resulting in superior detail, dynamics, and musicality. I have no idea whether there's any technical basis for this claim. Nor could one judge simply by listening, without taking out the triode-based circuit, inserting a conventional oscillator, and noting the difference (if any).[1] Still, based on what I did hear, I suspect there might be something to it.

Fred's setup

I connected the PrimaLuna to the Krell FBI integrated amplifier, which in turn fed the Verity Audio Parsifal Ovation speakers. Nirvana cables were used throughout. The PrimaLuna comes with a cage to cover the tubes, but I listened with the cage removed, mainly because it looked nicer. (I didn't notice any sonic difference.)

A note, *perhaps*, about quality control. The tubes are said to last 10,000 hours. (They're warranted for six months.) But on my review sample, long before that time span, one of the 12AX7s went bad—one channel suddenly sounded fuzzy with occasional crackling, a problem fixed by replacing the tube. Also, once, when I lifted the front of the player a few inches to place beneath it a Black Diamond Racing Cone (without turning the player off), one of the 5AR4 rectifier tubes started to flare. These instances may have been flukes; tubes are sometimes troublesome.

Speaking of those cones, they made a substantial sonic difference, more so than with most electronic gear. Without the cones, bass sounded considerably flabbier and transients less crisp. I noticed this in what was as close to a double-blind experiment as a person can conduct by himself. After listening

1 PrimaLuna's website is bereft of any details about the SuperTubeClock circuit, and a white paper I had been promised by PrimaLuna engineer Marcel Crouse had not materialized by the time this review went to press. In theory, there should be no change in the behavior of an oscillator circuit due to the nature of the active device, other than the higher available gain from solid-state devices allowing a higher Q, or Quality Factor. Looking at the circuit board, there is a crystal directly adjacent to the miniature triode, so I assume the tube is used in what would otherwise be a conventional crystal oscillator circuit. **–John Atkinson**

MEASUREMENTS

I examined the PrimaLuna ProLogue Eight's measured behavior mainly using Audio Precision's top-model SYS2722 system (see www.ap.com and "As We See It" in the January 2008 issue, www.stereophile.com/asweseeit/108awsi), as well as our Audio Precision System One and the Miller Audio Research Jitter Analyzer for some tests. As always, I experimented with the grounding between the player under test and the test set to give the lowest level of measured hum (see later).

The ProLogue Eight's error correction was one of the best I have encountered. While its digital output flagged errors when the gap in the data spiral on the Pierre Verany Test CD reached 2.5mm in length, the player's output didn't mute, and the sound of the 500Hz tone remained continuous. It finally muted when the data gaps reached 3mm in length. This is extraordinarily good performance.

The PrimaLuna's maximum output level at 1kHz was 2.13V, this 0.55dB above the CD standard's 2V. The output preserved absolute polarity; *ie*, was non-inverting. The player had a significantly higher output impedance than the norm, ranging from 2.7k ohms in the treble and midrange to an extraordinary 12k ohms at 20Hz. This player really does need to be used with an amplifier having an input of 50k ohms or more if the bass is not to sound a little lightweight. Many solid-state preamplifiers will not really be compatible with the ProLogue Eight; fortunately, PrimaLuna's ProLogue Three preamp has an input impedance of around 100k ohms in the bass and midrange. However, I believe that this high output impedance was the reason I felt the ProLogue sounded lean with the Parasound Halo JC 2 preamplifier, which has an input impedance at low and midrange frequencies of 27k ohms. By contrast, Fred Kaplan's Krell FBI amplifier has an unbalanced input impedance of 200k ohms, which is perfect for use with the PrimaLuna CD player.

Even so, with the Audio Precision System One's 100k ohm input impedance, the PrimaLuna's low-frequency response began to gently shelve down below 200Hz, reaching –0.5dB at 45Hz and –1dB at 18Hz (fig.1, top pair of traces). This will not be enough to make the player sound lightweight or lean, but it might lead to a feeling of improved low-frequency definition. At the other

Fig.1 PrimaLuna ProLogue Eight, frequency response at –12dBFS into 200k ohms, CD data (blue left, red right; 2dB/vertical div.).

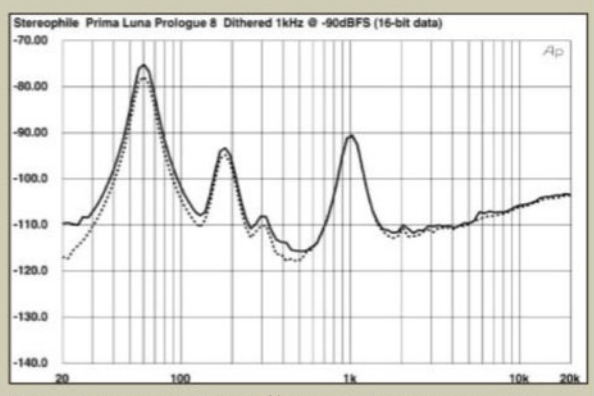

Fig.2 PrimaLuna ProLogue Eight, 1/3-octave spectrum with noise and spuriae of dithered 1kHz tone at –90dBFS with 16-bit CD data (right channel dashed).

for a while to a different CD player, I put the PrimaLuna back in the system but forgot the cones. It sounded worse (flabbier, less crisp) than I'd remembered. Then I noticed the missing cones. I put them back underneath, tips down, *et voilà!* Back to normal.

Fred on Sound

What *was* normal for the ProLogue Eight? I'm tempted to say, "About what one would expect of a $2500 CD player powered by tubes." Actually, it was better. The good things we've grown accustomed to hearing from tubes were all there: gorgeous midrange, sweet strings and saxophones, lifelike female singers, a soundstage with acres of depth. The deficiencies common to budget-priced tube units were there, too—tepid bass, rolled-off highs—but not nearly to the degree you might expect. Or, to the extent they were there, they were handled or offset in ways that made them less audible, certainly less objectionable. I think this is where that triode clock comes in—or, at least, *some* design feature that yields the same alleged effect.

One good test of bass, as I've noted elsewhere to the point of (some readers') exhaustion, is the first minute of David Zinman and the London Sinfonietta's recording of Górecki's

THE GOOD THINGS WE'VE GROWN ACCUSTOMED TO HEARING FROM **TUBES WERE ALL THERE**: GORGEOUS MIDRANGE, SWEET STRINGS AND SAXOPHONES, LIFELIKE FEMALE SINGERS, A SOUNDSTAGE WITH **ACRES OF DEPTH**.

measurements, continued

end of the spectrum is a slight rise in top-octave output. With pre-emphasized CD data (fig.1, bottom traces), the ProLogue Eight offers the not uncommon depression in the treble. As a result, the player will sound a little mellow on the few pre-emphasized discs that have been released. Channel separation (not shown) was better than 100dB in both directions in the upper midrange, but dropped a little at the frequency extremes.

To maintain historical continuity with past *Stereophile* reviews of digital components, I assess resolution by sweeping a ⅓-octave bandpass filter from 20kHz to 20Hz while the product under test decodes dithered data representing a 1kHz tone at –90dBFS. The resultant spectrum for the ProLogue Eight is shown in fig.2; while the left- and right-channel traces peak at –90dB, large peaks can also be seen centered at 60 and 180Hz, and a small one at 300Hz. As mentioned earlier, I experimented with the grounding between the PrimaLuna player and the Audio Precision test sets to give the lowest level of hum. However, the frequencies of the peaks in fig.2 suggest that they are due not to a ground loop but to magnetic coupling between the power-supply transformer and the audio circuitry. Fig.3 shows the same spectrum, but plotted on a linear frequency scale and derived in a different manner: by applying a Fast Fourier Transform to time-domain data. The hum components can again be seen, and though harmonic spuriae are absent, some stray, very-low-level tones are present.

Plotting the PrimaLuna's linearity error with a 500Hz tone swept from –60dBFS down to –120dBFS gave the traces shown in fig.4. The increasingly positive error below –90dB is due to analog noise. The ProLogue Eight's reproduction of an undithered 1kHz tone at exactly 90.31dBFS was good, with the three DC voltage levels clearly visible (fig.5). However, some higher-frequency analog noise is present, leading to more jagged-looking traces than usual. In addition, the low-frequency power-supply noise overlays the left- and right-channel traces and moves them apart. It is fair to note that I couldn't hear this AC supply hum from my listening chair at normal playback levels, but I could hear it when I turned up the volume to rock-out levels with recordings having wide dynamic range, such as Attention Screen's *Live at Merkin Hall* (Stereophile

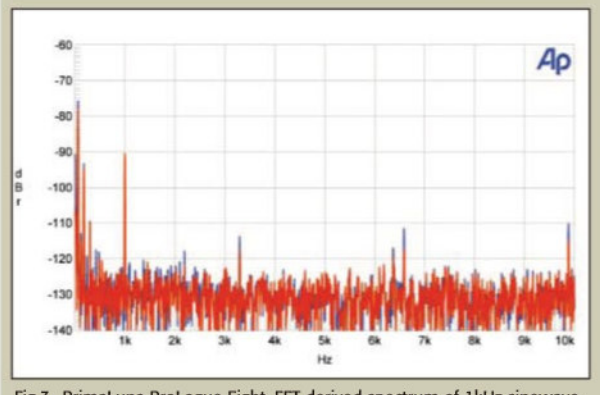

Fig.3 PrimaLuna ProLogue Eight, FFT-derived spectrum of 1kHz sinewave at –90dBFS into 200k ohms (blue left, red right; linear frequency scale).

Fig.4 PrimaLuna ProLogue Eight, linearity error.

Symphony 3 (CD, Elektra Nonesuch 79282-2), during which the double-basses sound out the melody in an octave so low that, on some systems, you can barely hear them at all. With the PrimaLuna, I couldn't hear the actual values of the lowest notes, but I could hear the attack of the bows and the harmonic overtones. In other words, I got a sense of the bass line; unless I'd heard this album on other, better CD players, I might not even have been aware that the bass was rolled off.

Similarly, at the start of "Mood Indigo," on Duke Ellington's *Masterpieces by Ellington* (CD, Columbia/Legacy CK 87043), I couldn't identify all the lowest notes that the bass player plucked, but I did hear the pluck. And since that pluck has a lot to do with the music's rhythm, dynamics, and emotional drive, I'd rather hear a pluck without the precise note than vice versa. On James Carter's tribute to Django Reinhardt, *Chasin' the Gypsy* (CD, Atlantic 83304-2), I could hear the guitarist's strummings, even if I couldn't quite hear the full body of the guitar. On the Maria Schneider Jazz Orchestra's *Sky Blue* (CD, ArtistShare AS0065), I didn't hear the cymbal's full shimmer, but I did hear the percussive edge of the drumstick hitting it. On Lorraine Hunt Lieberson's lovely disc of two Bach cantatas (CD, Nonesuch 79792-2), her slight sibilance on consonants—*g*, *k*, *ch*, and so forth—cut through distinctly. Without such clarity, sung words are unintelligible.

The ProLogue Eight didn't get all the subtlest transients quite right. When Erik Friedlander rapidly plucks the cello on his wondrous solo disc, *Block Ice & Propane* (CD, SkipStone 371013742), a CD player like the Krell Evolution 505 lets you hear not only his most intricate fingerwork but also the relative thickness of each string and its resistance to his plucking. The Pri-

measurements, continued

STPH018-2). By contrast, the Benchmark DAC 1 was deathly quiet at the same volume setting.

I had been warned that the PrimaLuna ProLogue Eight would show an increase in distortion with continuous tones approaching 0dBFS. PrimaLuna's design engineer in Holland, Marcel Crouse, says that this is due to saturation in the 12AX7 input tube. This "may seem odd in this time and age of vanishing low distortions and noise figures," he explained, "but we think that the real gain in sound quality is largely obtained elsewhere. Not that we purposely neglect harmonics and static noise, but we think that, when they are so benign as to be essentially inaudible because music itself is full of lower-order harmonics and hiss (such as tape hiss or ambient hall noise), we'd better concentrate on distortions that generate entirely new frequencies that are not present in the musical instrument at all in the first place—distortions that shift harmonics in phase, which degrade attacks and dynamics; and noise modulation that impairs transparency, focus, and imaging—all artifacts that we believe are far more seriously destroying the quality of the reproduction and the fun of listening to well-recorded good music."

Fair enough. However, I measured fairly high distortion with a maximum-level 1kHz tone driven into 100k ohms, the second harmonic lying at –36dB and the third at –43dB, with many higher-order spuriae visible. The situation was similar at low frequencies. Reducing the signal level to –3dBFS dropped these harmonics by 6dB or so (fig.6), but not until I reduced the signal level to –10dBS did all the harmonics drop to –50dB (0.3%) or below (fig.7). The 60Hz and 180Hz hum components can also be seen in figs. 5 and 6.

Concerned that we might have been sent a faulty sample, I contacted Marcel Crouse, who reassured me that my measurements were typical. "You saw the same thing in the PrimaLuna ProLogue Three preamplifier [reviewed in December 2006]. The tube stage of the ProLogue Eight is the same [as that of the Three] save for the volume control. . . . Also, the 60Hz hum seems to be consistent; I measure –86dB at 50Hz. (It seems to be the power transformer's stray field.) So we may conclude that your review sample is not faulty."

Looking at intermodulation distortion at maximum level, using my usual equal mix of 19 and 20kHz tones, each at –6dBFS, was, as expected from the earlier results, disappointing, with the 1kHz difference tone at –40dB (1%) and many other higher-order products present (not shown). Dropping the signal level by 10dB gave the spectrum shown in fig.8. (Ignore the rise in the noise floor above 15kHz, which is due to the noiseshaping I used to generate a 16-bit signal from a 24-bit original.)

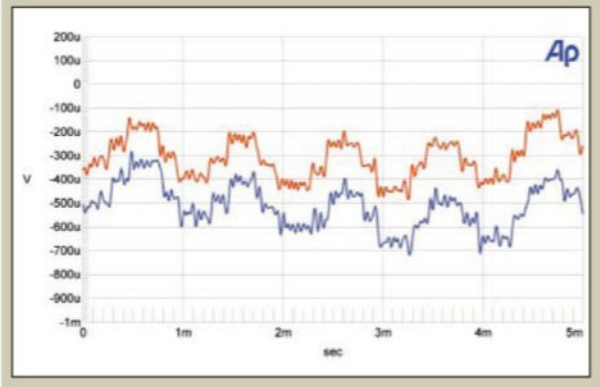

Fig.5 PrimaLuna ProLogue Eight, waveform of undithered 1kHz sinewave at –90.31dBFS, 16-bit data (blue left, red right).

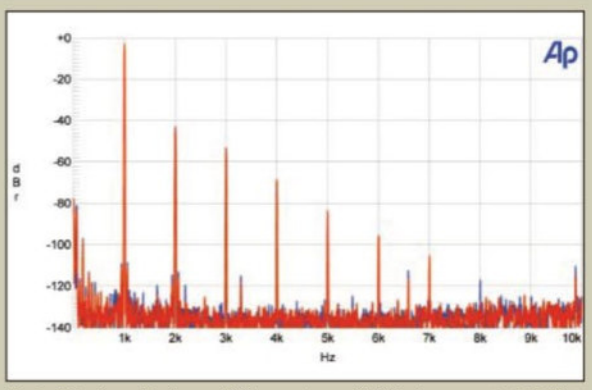

Fig.6 PrimaLuna ProLogue Eight, spectrum of 1kHz sinewave at –3dBFS into 200k ohms (blue left, red right; linear frequency scale).

maLuna didn't. Then again, the Krell costs four times as much.

The ProLogue Eight's shortcomings are more apparent with some recordings than with others. On the Lieberson disc, the double bass wasn't distinguishable from the organ; that reedy sound of the organ's pipes was obscured by sounds of a similar pitch. And while the depth of the recording venue was nicely captured (the oboe seems to be way back there), there wasn't much sense of air between the instruments from side to side.

And, back to the Górecki, in the middle of the first movement, when the basses growl right before the crescendo, the PrimaLuna didn't let me hear the growl. Fast transients and accurate overtones can go only so far in disguising an absence of truly deep bass.

Dynamic range was compressed a bit, but peaks weren't distorted or clipped; it was more like someone slightly easing up on the pedal. The high octaves were also rolled off a bit (hence the shortage of air), but the roll-off was smooth; there was no sense of a brickwall filter, no harshness.

—Fred Kaplan

Comparisons from John Atkinson

There are two important questions to be asked about a midpriced CD player like the PrimaLuna ProLogue Eight: 1) Does it offer sufficient sonic improvement over less-expensive products to be worth considering at all? and 2) does it approach the sonic performance of more expensive components, making its recommendation a no-brainer?

As Fred Kaplan admits above, his primary reference for his auditioning of the ProLogue Eight was the very much more expensive Krell 505 SACD player. (There is an inevitable conflict between a reviewer's need to have as a long-term reference a component whose sound he is intimately

The difference tone lies at –54dB (0.2%) ref. the signal (–64dB in absolute terms), which is respectable. More important, all the other spuriae are well down in level, though a product can be seen at 23.9kHz, this due to a rather "leaky" anti-aliasing filter.

I used both the Miller Jitter Analyzer and the Audio Precision SYS2722 to examine the ProLogue Eight's rejection of word-clock jitter. The two systems gave similar results; the spectrum produced by the Audio Precision is shown in fig.9. The jitter level was a fairly low 406.5 picoseconds peak–peak. More significant, the highest-level sidebands that can be seen either side of the central 11.025kHz tone in fig.9 lie at power-supply–related frequencies of ±60Hz and ±120Hz. Actual data-related sidebands were *much* lower in level; if it weren't for the supply-related spuriae, the ProLogue Eight would have very good jitter rejection. I suspect that it is these supply-induced sidebands that led Fred and me to feel the ProLogue Eight's upper bass sounded a little soft.

Summing up the PrimaLuna ProLogue Eight's measured performance is difficult, as some of the things it does wrong, such as the increasing distortion at levels above –10dBFS, will not be that audible with typical music—a distorted snare-drum peak sounds the same as a clean one. But I was concerned about the effect of the transformer-radiated hum. I was also bothered by the very high output impedance at low frequencies, which will make system matching more difficult than usual.

—John Atkinson

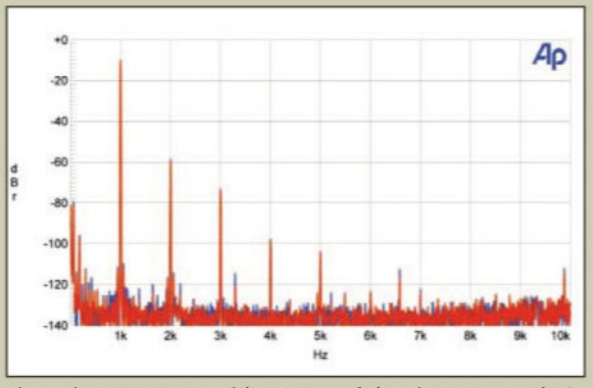

Fig.7 PrimaLuna ProLogue Eight, spectrum of 1kHz sinewave at –10dBFS into 200k ohms (blue left, red right; linear frequency scale).

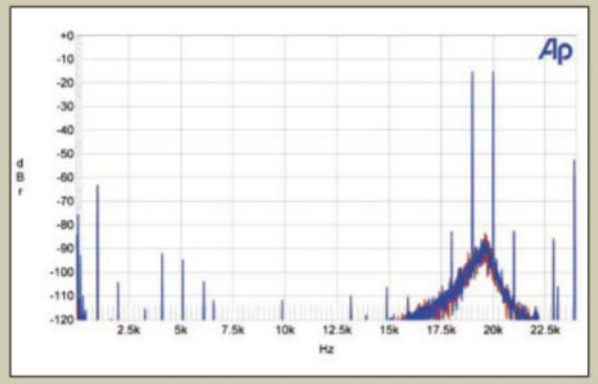

Fig.8 PrimaLuna ProLogue Eight, HF intermodulation spectrum, 19+20kHz at –10dBFS peak into 200k ohms (blue left, red right; linear frequency scale).

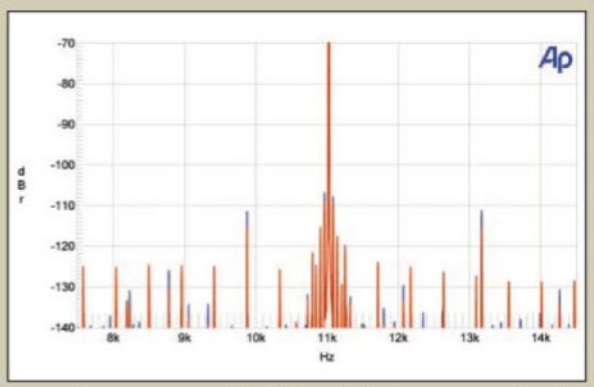

Fig.9 PrimaLuna ProLogue Eight, high-resolution jitter spectrum of analog output signal, 11.025kHz at –6dBFS, sampled at 44.1kHz with LSB toggled at 229Hz, 16-bit data. Center frequency of trace, 11.025kHz; frequency range, ±3.5kHz (blue left, red right).

familiar with, and other components that are directly competitive with the product being tested.) The first of these two questions was left unanswered, therefore. As I have a stable of players available for comparison, I stepped into the review.

I did a long series of comparisons between the PrimaLuna and four digital sources that I know well: the Ayre C-5xe universal player ($5000), which has been my long-term reference since I bought a sample following Wes Phillips' review in July 2005; the now-discontinued Oppo DV-970HD universal player ($149 when available), which WP enthusiastically reviewed in May 2007; the Pioneer DV-578A universal player ($150), one of which I bought a few years back to use as a low-priced reference (no review, though the Pioneer chassis has been used as the basis for a number of high-end universal players, and WP used it as a reference in his Oppo review); and the Benchmark DAC 1 USB D/A converter/headphone amplifier ($1275), which I reviewed in January 2008. The Benchmark is a superb-sounding DAC and a bargain at its price (and even more so at $975, which is what it costs without the USB input). Given that it will produce close to Class A CD sound for not much more than a kilobuck when used with an inexpensive player such as the Oppo[2] or Pioneer, I feel that the Benchmark DAC 1 sets the bar for players that cost significantly more.

All comparisons were performed matching the sources' output levels to within 0.1dB at 1kHz. For the player comparisons, I used duplicate CDs playing synchronously on both players. For the comparisons with the Benchmark, the DAC was driven via a 1m length of AudioQuest OptiLink-5 from the PrimaLuna's digital output.

I also used the ProLogue Eight as my primary CD player for quite a while, but became increasingly dissatisfied with a lean tonal balance. (I also didn't like the slowness of the PrimaLuna's disc tray, but that's a more personal thing.) I stopped using the player to examine its measured performance, which revealed the reason for the tonal problem: the Parasound Halo JC 2 preamplifier has a moderately low input impedance of 27k ohms in the midrange and bass; the ProLogue Eight's output impedance is 2.7k ohms in the treble and midrange, but rises to a very high 12k ohms at 20Hz. The voltage divider formed by this value and the input impedance of the Parasound preamp will shelve down the low bass by up to 2.4dB. This is not much in absolute terms, but in my system and room it was enough to unbalance the PrimaLuna's sound. Crestfallen, I replaced the Halo JC 2 with the Mark Levinson No.380S, which has an input impedance of 100k ohms. All the remaining auditioning and all the comparisons were performed with this preamp.

Once that had been sorted out, my opinion of the PrimaLuna ProLogue Eight was very positive, in that it did one thing superbly well: it threw the widest, deepest soundstage from CDs that I have experienced with any player. Perhaps even more important, individual images within that stage were clearly delineated, with a palpability more akin to what you get from SACD (or LP). At the beginning of April I recorded Bob Reina's jazz group Attention Screen live at Otto's Shrunken Head, a Manhattan tiki bar, using an ORTF pair of cardioid mikes. The individual drums of Mark Flynn's kit were clearly positioned farther toward the back of the stage than the bass guitar, keyboard, and guitar. But it was the palpability of the offstage noises, such as the pinball machine in the adjacent bar area, and the sounds of members of the audience talking between songs, that impressed me when the resultant CD was played back on the ProLogue Eight. In this, the Dutch player outperformed even the Ayre C-5xe!

Compared directly with the Ayre, however, the ProLogue Eight didn't go quite as deep in the bass, nor was its upper bass quite as well defined. Sounding a little soft, the upper harmonics were slightly emphasized, to the detriment of the fundamental and the second harmonic—not unpleasant, but not strictly accurate, either. Kick drum on Attention Screen's recording at Otto's had a slightly better-delineated "thud" through the Ayre. Overall, the solid-state player had a more delicate but more laid-back upper midrange than the tubed one, which proved a more synergistic match with the forward-balanced Avalon NP 2.0 speakers.

The PrimaLuna did sound more dynamic overall, but on the channel-identification tracks on *Editor's Choice* (CD, Stereophile STPH016-2), my bass guitar had a touch too much "bite" to its sound than with the Ayre. It's fair to note, however, that the differences between the two players were not night-and-day.

Turning to the other end of the price spectrum, my next comparisons were with the Oppo DV-970HD. Consistent differences were easier to hear. The cheap player dried up the

ASSOCIATED EQUIPMENT

FRED KAPLAN'S ASSOCIATED EQUIPMENT
DIGITAL SOURCES Krell Evolution 505 SACD player, Simaudio Moon CD 5.3 CD player.
INTEGRATED AMPLIFIER Krell FBI.
LOUDSPEAKERS Verity Audio Parsifal Applause.
CABLES Nirvana.
ACCESSORIES Bybee Signature Model Power Purifier, Monster Cable AVS2000 voltage regulator, Black Diamond IV Racing Cones.
—Fred Kaplan

JOHN ATKINSON'S ASSOCIATED EQUIPMENT
DIGITAL SOURCES Ayre C-5xe, Pioneer DV-578A, Oppo DV-970HD universal players; Benchmark DAC 1 USB D/A converter.
PREAMPLIFIERS Parasound Halo JC 2, Mark Levinson No.380S.
POWER AMPLIFIERS Mark Levinson No.33H.
LOUDSPEAKERS PSB Synchrony One, Epos M16i, Avalon NP Evolution 2.0, Magico V3.
CABLES Digital: Kimber Illuminations Orchid AES/EBU, AudioQuest OptiLink-5 S/PDIF. Interconnect (balanced): AudioQuest Cheetah, Ayre Signature Series. Interconnect (unbalanced): Linn, Canare. Speaker: AudioQuest Kilimanjaro. AC: PS Audio Lab, manufacturers' own.
ACCESSORIES Target TT-5 equipment racks; Ayre Myrtle Blocks; ASC Tube Traps, RPG Abffusor panels; PS Audio Power Plant 300 at 90Hz (sources, preamps), Audio Power Industries 116 Mk.II & PE-1, APC S-15 AC line conditioners (not power amps). AC power comes from two dedicated 20A circuits, each just 6' from the breaker box, a power amplifier plugged into each.
—John Atkinson

2 The big disappointment for me with the Oppo used as a transport was that its digital output truncates 24-bit DVD data to 16 bits. This doesn't affect its recommendation as a CD transport, however.
—John Atkinson

The two 5AR4 rectifier tubes sit at the back, the signal tubes at the front.

recorded acoustic a little, sounding deader as a result. The subtle manner in which Don Fiorino's electrified lotar lights up the hall on "Mansour's Gift," from Attention Screen's *Live at Merkin Hall* (CD, Stereophile STPH018-2), was more effectively conveyed by the PrimaLuna. In the orchestral arrangements of Gershwin's *Preludes for Piano* on *Editor's Choice*, the soundstage was flatter and drier through the Oppo, which also rendered the bass guitar and lower-pitched tom toms as sounding more "hummy." The occasional rustle and tick from the audience in the live recording of the Mozart Flute Quartet on that CD was less well delineated through the Oppo, less identifiable as offstage noise than via the PrimaLuna, and the image of the solo flute was wider and slightly less stable.

The Oppo did have a smooth if rather bland balance that went some way toward taming the Avalon speakers' forward upper midrange. But its sound was curiously uninvolving overall.

I had a different experience from Wes Phillips with the Pioneer when I compared it to the Oppo. Wes had written that he found that the Pioneer's high frequencies sounded less smeared than the Oppo's, though he felt both players had disappointing lows. Yes, the low frequencies were very similar, but I felt the Pioneer both to have a little more top-octave energy and a more involving sound, with a better-fleshed-out midrange. The piano on my recording of Robert Silverman performing Liszt's *Liebestraum* on *Editor's Choice* was more organic in its presentation, by which I mean the percussive attack to the notes was better integrated with the following body of the tone. However, the Pioneer still didn't begin to approach the palpability of the PrimaLuna player in this respect. Its soundstaging was flatter, and it lacked both the dynamics and the sense of top-octave ease that characterized the ProLogue Eight.

It was against the Benchmark DAC 1 that the match became more equal. Not only did the standalone DAC have a more delicate, more articulate midrange and better-defined low frequencies, its soundstaging was far closer to the PrimaLuna's than those of the inexpensive universal players had been. The image thrown by the Benchmark was wider than that of the ProLogue Eight, with very slightly more top-octave air, though the tubed player still did better when it came to ultimate image depth and sense of bloom.

The ProLogue Eight had more forceful dynamics, the Benchmark blacker blacks. But as with the Ayre comparisons, and again putting to one side the enormous soundstage thrown by the tubed player, I'm not talking about enormous differences here. Which presentation will be preferred will depend very much on the listener's taste in sound and music, as well as on the rest of the components. The Benchmark would be the better choice in systems that are balanced a bit on the forward side; the PrimaLuna would be best in systems that tend to be laid-back.

So, to answer my two questions: yes, the PrimaLuna ProLogue Eight[3] definitely offers a considerable step forward in sound quality compared to entry-level players; and yes, when it comes to soundstaging at least, it does compete on the highest level.

—John Atkinson

Fred Kaplan Sums Up

In sum, the PrimaLuna ProLogue Eight is a very fine CD player for the money. Its designers seem keenly aware of the machine's strengths and weaknesses, and they know how to maximize the former and finesse the latter.

—Fred Kaplan

3 PrimaLuna offers two upgrades for the ProLogue Eight, each comprising a plug-in printed circuit board with the standard NE5534 op-amp chips replaced with unidentified chips offering lower noise and a much higher slew rate. I will report on the effect of these upgrades in a "Follow-Up." **—John Atkinson**