

PrimaLuna DiaLogue Three

ART DUDLEY
PREAMPLIFIER



DESCRIPTION

Line-level, remote-control, tubed preamplifier. Inputs: 5, on RCA jacks. Outputs: 2, on RAC jacks. Tube complement: two 5AR4, four 12AU7. Maximum voltage gain: 12dB. Frequency response: 10Hz–130kHz, +0/–3dB. Input impedance: 220k ohms. Input sensitivity: 220mV. Output impedance: 2500 ohms. THD: 0.15% at 2V. Signal/noise ratio: >100dB (weighted) at 2V.

DIMENSIONS 15.2" (385mm) W by 8.3" (210mm) H by 15.9" (405mm) D. Weight: 52.9 lbs (24kg).

SERIAL NUMBER OF UNIT REVIEWED 10045276.

PRICE \$2599. Approximate number of dealers: 33

MANUFACTURER Durob Audio BV, PO Box 109, 5250 AC Vlijmen, The Netherlands. Tel: (31) 73-511-25-55. Web: www.primaluna.nl.
US distributor: PrimaLuna USA, 2504 Spring Terrace, Upland, CA 91784. Tel: (909) 931-9686. Web: www.primaluna-usa.com.

At what point does a domestic audio product cease to be an appliance and assume a loftier place in one's home and heart? We all can agree that a Bose Wave CD player sits at one end of that continuum, a Koetsu Jade Platinum phono cartridge at the other—but what of all the products in between? Scarcity, mode of manufacture, appearance, even sentimentality (“This is *just* like the one my father used to have!”)—each plays a role, but there's no doubt that topping the list is price: The more we pay, the more we love.¹

If we remove price from the equation, what then? Is sheer quality enough to tip the balance? Given the availability of audio goods designed in America or Europe and manufactured in the Far East, the answer may already be at hand: Although hand-wired vacuum-tube electronics have long been among the most cherished audio heirlooms, those sorts of thing are now available *at popular prices*, as the saying goes.

Consider PrimaLuna, who design preamplifiers, power amplifiers, and integrated amplifiers in the Netherlands, and manufacture them in their own factory in the People's Republic of China. Far from being just a me-too maker of undistinguished gear or—worse still—a forger of other people's designs, PrimaLuna has impressed me and other reviewers with their innovative circuits and very high build quality, not to mention a level of performance that, nuances aside, can be summed up in three beautiful words: *classic tube sound*. Thus, when John Atkinson asked me to audition their new top-of-the-line DiaLogue Three preamplifier (\$2599), I was, as they say, all over it.

¹ That, of course, is a sliding scale unto itself: To the consumer of comfortable means, a \$500 record player might be little more than a commodity, while the person who's saved for months or even years to buy such a thing would think of it as a cherished possession, and rightly so.

Description

The first thing I noticed about the Dia-Logue Three—before the nice paint-work, before the point-to-point wiring, before the sound—was its considerable weight: 53 pounds of iron, steel, and copper, not to mention all those vacu-ums. This preamplifier weighs half again as much as some of my favorite tube *power* amplifiers, and three times as much as my dog.

That's because the DiaLogue Three is designed and constructed as a dual-mono preamp—all the way through, including the power supply and, unusually, the mains transformers. Said trannies appear to have been made specifically for the Three, and are protected with a circuit that detects excess heat and temporarily interrupts the primary feed, should things require cooling down. Shoppers in hell, take note.

The DiaLogue Three is housed in a steel chassis whose shape also calls to mind that of a classic tube amp. A vented transformer cover towers over the rearmost portion of the low-slung surface, the latter interrupted by six tubes: two rectifiers and four dual-triodes. The

The latter is aluminum alloy with a satin finish, while the remainder of the Dia-Logue Three is painted with five coats of hand-rubbed blue-gray lacquer.

The preamplifier circuit is straight-forward: In each channel, the line-level input signal is conducted, by means

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tubes are protected from the user, and vice versa, by a removable cage shaped like a roll-top desk's most distinguishing feature, and the front of the chassis is fitted with a modestly sized faceplate.

of a shielded cable, to the signal grid of a 12AU7 dual-triode tube, the two halves of which are operated in parallel. The ganged plates of that tube are tied, via a Solen capacitor, to the input of a

MEASUREMENTS

I measured the PrimaLuna DiaLogue Three using the Audio Precision SYS2722 system (see www.ap.com and the January 2008 "As We See It," www.stereophile.com/content/measurements-maps-precision), as well as my vintage Audio Precision System One. The maximum gain at 1kHz into 100k ohms was lower than the specified 12dB, at 9.67dB in the left channel and 9.9dB in the right. The preamp preserved absolute polarity (*i.e.*, was non-inverting), and the input impedance was very high, at >150k ohms at all frequencies. (I can't be more precise because the voltage-drop method that I use to measure input impedance becomes increasingly inaccurate for impedances above 100k ohms or so.)

The DiaLogue Three's output impedance is specified as a high 2500 ohms; I measured 2400 ohms at high and middle frequencies but 4000 ohms at 20Hz, which will be due to the limited size of the output coupling capacitor. (A coupling cap needs to have a high value, but the desired plastic-film types are also physically large.) As a result, the frequency response into the punishingly low 600 ohm impedance will roll off prematurely at low

frequencies (fig.1, cyan and magenta traces), reaching -3dB at 28Hz. Into 100k ohms (fig.1, blue and red traces), the response is flat to below 20Hz, though the ultrasonic response is curtailed compared with the condition of low load impedance. At -0.25dB at 20kHz, however, this will have no audible consequences. This graph was taken with the volume control set to its maximum, and a 0.23dB channel imbalance can be seen. Repeating the measurement with the control set to unity gain (2:00) gave the same imbalance, which suggests that it is due to an intrinsic difference in gain between the two channels rather than to volume-control mistracking.

The PrimaLuna's low-frequency channel separation was moderately good, at 90dB in both directions at 100Hz, though the separation decreased to 45dB at the top of the audioband. The unweighted, audioband noise levels, measured with the input short-circuited but the volume control set to its maximum, were low, with a signal/noise ratio of 87.5dB in the right channel but 80dB in the left. Switching an A-weighting filter into circuit increased both ratios to 97dB.

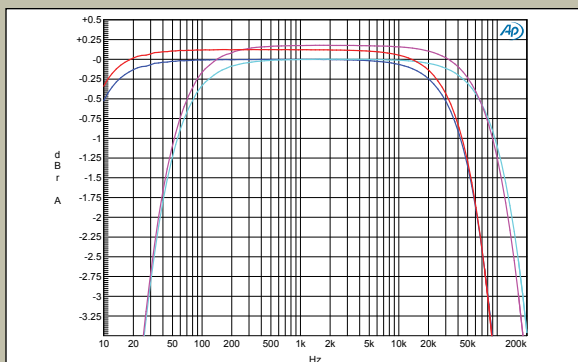


Fig.1 PrimaLuna DiaLogue Three, frequency response at 1V with volume control at maximum into 100k ohms (left channel blue, right red) and 600 ohms (left cyan, right magenta). (0.25dB/vertical div.)

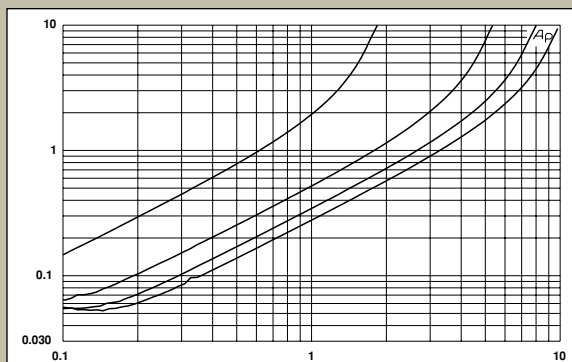


Fig.2 PrimaLuna DiaLogue Three, distortion (%) vs 1kHz output voltage into (from right to left at 1% THD): 100k, 10k, 3k, 600 ohms.

motorized Alps volume pot, the output of which is sent to the signal grid of a second 12AU7, also operated with its two halves in parallel. The plates of that tube are capacitively tied to the output jacks . . . and there you have it. Except for that very last connection (the printed circuit board for the power supply is also home to the chunky Solen signal-output caps), the preamp section is hand-wired, point to point, with liberal use made of nice-looking ceramic terminal strips, which are cemented to the inside of the chassis.

The DiaLogue Three's power supply, which is constructed using both point-to-point wiring *and* the remainder of that PCB, uses a single 5AR4 tube for the rail voltages of each channel. Filament voltages for the rectifier

tube are supplied by dedicated secondaries of the mains transformers, while full-wave rectifiers constructed with discrete diodes are used to heat the signal tubes.

A modestly sized solid-state preamp board (\$199) can be used to change one of the DiaLogue Three's inputs to a moving-magnet phono input, but that option wasn't provided with my review sample. As typically supplied, the preamp's rear panel has five line-level inputs, two system outputs, one tape-monitor output, and pass-through jacks for driving a surround-sound device in a home-theater system. The front panel sports only a volume knob and a source-selector knob, which of course prompted my usual teary whine: I *wish* the PrimaLuna had a balance control

and, especially, a mono switch. I would happily trade that surround-sound thing for the latter.

Included in the price is a remote-control handset that incorporates all the user controls for this and, apparently, all other PrimaLuna products—including the Triode/Ultralinear mode switch for the aforementioned DiaLogue Seven power amplifier. The handset is built into a chunky aluminum-alloy housing of reassuring heft, although a seam between the two halves of the housing had an edgy feel that, in time, discouraged me from using the remote. (I needed the exercise anyway.)

The DiaLogue Three's external fit and finish were very good, and its internal build quality was nothing short of magnificent.

measurements, continued

The DiaLogue Three appears to use only a limited amount of negative feedback, as the plot of its THD+noise percentage against output voltage reveals a steady increase of the former into all loads (fig.2). While the low-level THD+N is low into the higher impedances, dropping below 0.1% below 330mV or so, this graph indicates that loads below about 3k ohms are best avoided with this preamp. Even so, the THD reaches 0.58% at 2V into 100k ohms, about the highest level the preamplifier will be required to deliver in practice. The small-signal THD+N percentage remains constant with frequency (fig.3).

Fortunately, the spectrum of the distortion is heavily second-harmonic in nature (fig.4). This graph also shows the slightly higher level of random noise in the left channel (blue trace), and the highest power-supply component is the third harmonic at 180Hz, which lies at -97dB left and -100dB right. This is presumably due to magnetic leakage from the power transformer, but is too low in level to be audible, even when the signal level drops to 300mV (fig.5). The only disappointing aspect of the DiaLogue Three's measured behavior was with the high-frequency intermodulation test, where, even at 300mV, the equal mix of 19 and 20kHz tones re-

sulted in a 1kHz tone at -46dB (0.5%). However, the higher-order products at 18 and 21kHz lay below -70dB (0.03%).

The PrimaLuna DiaLogue Three's measured performance is related to its low-feedback tubed circuitry; but taking that into consideration, it gets a clean bill of health.—John Atkinson

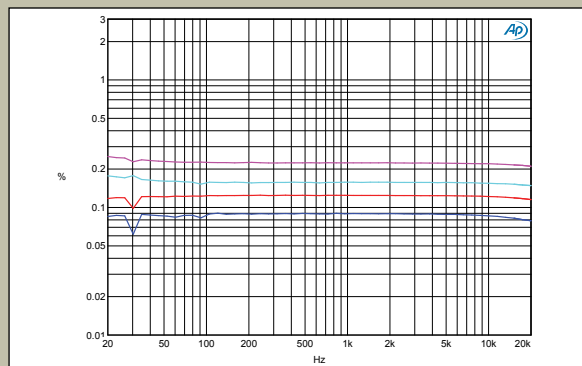


Fig.3 PrimaLuna DiaLogue Three, THD+N (%) vs frequency at 300mV into 100k ohms (left channel blue, right red) and 3k ohms (left cyan, right magenta).

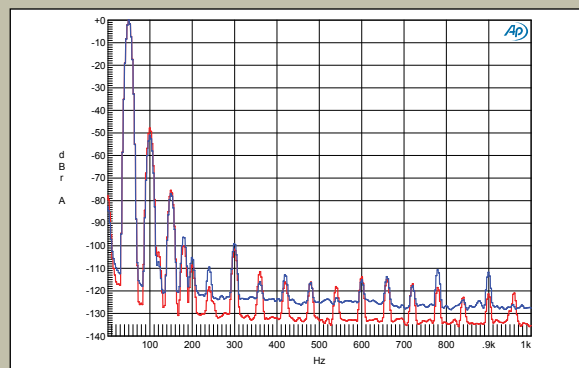


Fig.4 PrimaLuna DiaLogue Three, spectrum of 50Hz sine wave, DC-1kHz, at 1V into 100k ohms (left channel blue, right red; linear frequency scale).

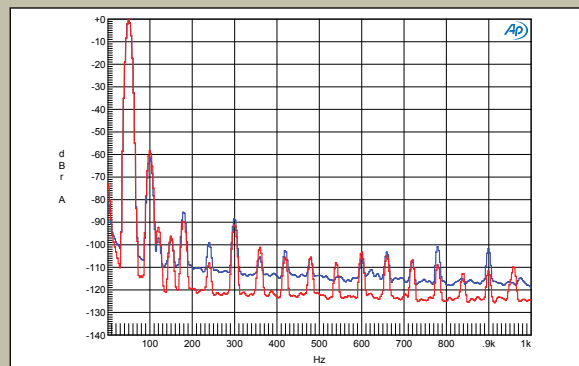


Fig.5 PrimaLuna DiaLogue Three, spectrum of 50Hz sine wave, DC-1kHz, at 300mV into 100k ohms (left channel blue, right red; linear frequency scale).

Installation and setup

Setup? Not a lot to talk about: PrimaLuna's packaging is good enough that the DiaLogue Three can be shipped with its tubes and tube cage already in place. The only challenge in installing my review sample was lifting it clear of the carton.

I used the DiaLogue Three in my usual system, driving my Shindo Corton-Charlemagne and Fi 2A3 amplifiers. Because my system is arranged with power amps and preamps rather close to one another, I use interconnects no longer than 2m—and make up the difference with very long speaker cables, of course. Thus I can't comment on the DiaLogue Three's ability to drive significantly longer interconnects without sonic penalty, although the preamp's 2500 ohm output impedance would seem cause for some caution in that respect.

Like every other PrimaLuna product I've tried, the DiaLogue Three is equipped with the company's SoftStart circuitry, which powers up the tubes' filaments and grids before gradually applying the rail voltage. That feature and all other preamplifier functions worked without flaw in my system, and the DiaLogue Three produced only a moderate amount of heat.

A final observation: The owner's manual, though physically humble, was thorough, helpful, and clear, with useful observations on tube rolling, maintenance, and troubleshooting (not that you'll require the last two or desire the first).

Listening

I hope not to make *too* many published statements that stink of audio-review cliché, but I was surprised at how good this moderately affordable preamplifier sounded. More to the point, I was struck by how *big* it sounded—and not just big, but *huge*. One of the things I love best about my reference Shindo Masseto preamp is its sense of scale, and how well it succeeds at making things sound big when they ought to; the PrimaLuna DiaLogue Three was cut from the same cloth, with generous width and height, particularly with symphonic music. In Riccardo Chailly's recording with the Concertgebouw Orchestra of Theo Verhey's orchestration of Berg's Piano Sonata, Op.1 (CD, London 448 813-2), the ensemble was satisfyingly big, and quite believable in the way its physical presence increased as the music veered into the loudest, most densely scored passages (the crescendo beginning 7:20 into the piece, for example). The Three's



tonal performance with that recording was equally convincing, the PrimaLuna doing a lovely job with the sounds of the darker woodwinds (bassoon and contrabassoon), which carry some of the most important lines in this work.

On the subject of believable timbres, the DiaLogue Three sounded wonderful with the 2006 reissue of the first, eponymous album by Crosby, Stills & Nash (CD, Atlantic/Rhino R2 73290)—not the original tracks, most of which sound awful (the voices in some songs were apparently punched in so many times that they suffer a dullness that the pricey LP reissues have seemed to only accentuate), but in the four bonus cuts. With the trio's seemingly impromptu

preamp standards—while subtler timing distinctions, such as those throughout Mari Tsuda's 1996 recording of piano pieces by Satie (CD, JVC 6506-2), were well preserved by the DiaLogue Three.

And I'm compelled to share with you A Guilty Pleasure: I used the PrimaLuna to play my favorite ELO album, *Eldorado* (CD, Epic/Legacy EK 85419), and was surprised by both the superb sound *and* the sense of physical impact. In contrast to, say, Ringo Starr's tea-towel-on-drumhead approach (literally: that's how he got his sound toward the end of the Fabs' recording career), band-leader-producer Jeff Lynne preferred a sharp snare-drum sound and frequent use of a tambourine mounted on the hi-hat. Those effects came across with as much timbral distinction and impact as needed—yet were never *too* much. In fact, through the PrimaLuna, the whole of the mix was a virtually ideal combination of timbrally rich strings, percussive *whap*, and an openness that allowed a sonic view of the arrangements that was much clearer than usual with this recording. I was impressed.

Perhaps the DiaLogue Three's greatest departure from my ideal was its tendency to sound a bit *too* thick and heavy throughout the midbass, compared with the gear I use daily (which, I hasten to remind, costs four to seven times the PrimaLuna's asking price). With Nick Drake's "Time Has Told Me," from *Five Leaves Left* (ripped from CD, Island 422 842 915-2), the DiaLogue Three lost some of the detail and texture in Danny Boyle's wonderful upright-bass playing, and gave Drake's voice a bit more

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recording of Fred Neil's "Everybody's Talking," the PrimaLuna succeeded in getting across the rich sounds of the voices and—especially—Stephen Stills's big old Martin guitar.

Timbral richness came without the penalty of temporal distortion. "Train Running Low on Soul Coal," a wonderful up-tempo number from XTC's *The Big Express* (CD, Toshiba/EMI TCOP-65717), had all the momentum and *drive* I expected—if not quite to Naim NAC72

of a baritone quality than it should have had. Much the same could be said of the deeper notes in "April in Paris," from Thelonious Monk's *Thelonious Himself* (ripped from CD, JVC VICJ-60170), whose deepest notes the Shindo Vosne-Romanee portrayed with greater clarity and nuance. For that matter, the Shindo also put across an even better sense of physicality and *touch*, in terms not only of overall force, but also of the humanness with which that force was delivered.

Conclusions

It's 2011, and I'm free to buy anything I damn well please, except for Cuban cigars, marijuana, or tortoiseshell guitar picks. (I'm saying that only for fun: I'm not really interested in the first two.) I can even buy Chinese-made tube electronics if I wish—or not. Either choice stands a chance of being right, depending on my budget and my point of view; the only thing that's wrong is the idea of someone else trying to make the decision for me.

Like so many people who have the opportunity to audition lots of gear—reviewers and dealers mostly, I suppose—I

ASSOCIATED EQUIPMENT

ANALOG SOURCES Garrard 301, Thorens TD 124 turntables; EMT 997, Schick tonearms; Ortofon SPU & 90th Anniversary SPU, Shindo SPU, EMT TSD 15 cartridges.

DIGITAL SOURCES Wavelength Cosecant, Furutech GT40, Ayre Acoustics QB-9 USB D/A converters; Apple iMac G5 computer (running Apple iTunes V.10.2.2, Decibel V.1.0.2 playback software); Sony SCD-777 SACD/CD player.

PREAMPLIFICATION Auditorium 23 Standard (SPU version) & Hommage T1, Silvercore One-to-Ten step-up transformers; Shindo Masseto & Vosne-Romanee preamplifiers.

POWER AMPLIFIERS Shindo Corton-Charlemagne, Fi 2A3 & 421A.

LOUDSPEAKERS Audio Note AN-E/SPe HE, Voxativ Ampeggio.

CABLES USB: Nordost Blue Heaven. Interconnect: Audio Note AN-Vx, Shindo Silver, Nordost Blue Heaven. Speaker: Auditorium 23. AC: Ocellia Reference.

ACCESSORIES Box Furniture Company D3S rack under source & amplification components; OMA slate plinth under Thorens TD 124; Keith Monks record-cleaning machine.—**Art Dudley**

carry with me an idea of the sort of quality one can expect from, say, a \$500 record player or a \$25,000 amplifier or a \$1000 pair of speaker cables. I used to have an idea of what sort of performance an audio consumer could expect from a \$2600 tube preamp, but I don't anymore: The PrimaLuna DiaLogue Three, whose only major failing may be the

excessive use of uppercase letters in its name, exceeded that preconception by a healthy margin.

It's simple: For the person with a taste for tubed electronics, and whose budget hews closer to Labouré-Roi than to Romanée-Conti, the PrimaLuna Dialogue Three is a shoo-in, a must-hear, and a potential hand-me-down. ■