

Mystère ia21

ERICK LICHTÉ

TUBED INTEGRATED AMPLIFIER



DESCRIPTION Tubed integrated amplifier. Tube complement: four 6SN7, four KT88 or EL34. Power output: 50Wpc into 8 ohms (17dBW), 1% THD. Bandwidth: 4Hz–80kHz, ± 0.3 dB, at 1W; 9Hz–52kHz, ± 1 dB, at 50W. Signal/Noise Ratio: >90 dB (A-weighted). Voltage Gain: 30dB (31.1x) at maximum volume. Distortion: 0.05% at 1W, 0.2% at 10W, 1% at full power (50W). Power consumption: 230W maximum.

DIMENSIONS 16.9" (430mm) W by 7.9" (200mm) H by 16.4" (420mm) D. Weight: 59.4 lbs (27kg).

SERIAL NUMBER OF UNITS

REVIEWED 210213, 210221.

PRICE \$2995. Approximate number of dealers: 23.

MANUFACTURER Mystère–Durob Audio BV, PO Box 109, 5250 AC Vlijmen, The Netherlands. Web: www.mystere-eu.com. US: Mystère USA, 1042 N. Mountain Avenue, PMB 406, Upland, CA 91786. Tel: (909) 931-0219. Web: www.mystere-usa.com.

My first trip to a Consumer Electronics Show, in January 2010, was an eye-opener. Not only had I never before seen the phony glories of Las Vegas, it was the first time I'd been to a high-end audio show. Between the offerings on the top floors of the Venetian and T.H.E. Show at the Flamingo, I met some great people and heard some wonderful new products. One of those people was distributor Kevin Deal, and one of those new products was from Mystère. Though I was familiar with the PrimaLuna line that Deal also distributes, Mystère was, well, a mystery. However, after a listen to the Mystère pa21 power amplifier making a pair of MartinLogan speakers sing, and after noting the reasonable prices for some of Mystère's beautifully designed and built amps, I put Mystère in my review queue.

Mystère

Mystère is a brand of Durob Audio, a Dutch company known for its PrimaLuna and Ah! Tjoebe brands and the Kiseki phono cartridges. Kevin Deal, of Mystère USA told me, "Durob is one of the largest distributors of the most respected brands of audio throughout Belgium and the Netherlands." While all of Durob's products are designed in Europe, they are, like much audio gear these days, made in China.

The obvious comparison for the Mystère line is PrimaLuna. Some folks assume that Mystère is simply an upper-crust version of the PrimaLuna line, as Lexus is to Toyota. Not so. First, the most significant difference between the two lines is that

Mystère runs its output tubes in pentode, PrimaLuna in the more conventional triode/ultralinear mode.

"I, for one, have a real affection for pentode amps," said Deal. "You let them run without a lot of negative feedback, so the output impedance is slightly higher. You get the color and glory of [a single-ended triode tube], but with power, and the resulting sound is very tasty. When I think about some of my favorite amps over the years, many of them were pentode designs, or a variation on that. Everybody loved the midrange color and richness. Then most amps went to an ultralinear [topology], and used more feedback to get a lower output impedance. Better measurements, but everyone said, 'Something is missing.' I agree."

There are also big differences in the looks of the Mystère and PrimaLuna products. Not only are the Mystère models clad in a gorgeous gloss-black finish (which I usually don't dig, but



this one is amazing), they're completely void of bells and whistles. While you can get a remote control, tape outputs, and other conveniences with a PrimaLuna integrated, the Mystère ia21 integrated amplifier (\$2995) is a more minimalist product. On the rear it has four RCA inputs, and 4 and 8 ohm taps, and on the front are a selector knob, and, to

control the volume, a stepped attenuator built by Mystère. On the side is a rocker switch to auto-bias its KT88 or EL34 tubes. That's it. If you want to hook up a subwoofer, you need to go through the amp's speaker outputs. You'll also need to get your lazy fanny off the couch to change the volume and input.

The overall feel of the amp is one of simplicity and purity.

The ia21 is Mystère's most powerful integrated amplifier. Running KT88 tubes, it's claimed to put out 50Wpc of pentode power. The ia21's Adaptive Auto-Biasing makes keeping the output tubes perfectly biased a snap. In my experience, an amp that mismatches the bias between tubes by even 1–2mV doesn't sound as good as one that's been properly biased. The auto-biasing will ensure that your tubes are always in the zone, and eliminate any neuroses you might otherwise develop by worrying if your tube biases are matched. The auto-bias also makes tube rolling fun and easy.

MEASUREMENTS

To perform the measurements on the Mystère ia21, I mostly used *Stereophile's* loan sample of the top-of-the-line Audio Precision SYS2722 system (see the January 2008 "As We See It" and www.ap.com); for some tests, I also used my vintage Audio Precision System One Dual Domain.

As Erick Lichte mentioned, he sent me the first sample of the ia21 (S/N 210213) after his preliminary auditioning, as there seemed to be something wrong. I carried out a full set of tests with the amplifier, and yes, one channel was offering around ten times the distortion of the other. Swapping the KT88 output tubes from one channel to the other didn't change each channel's behavior; however, swapping the 6SN7 input tubes did move the higher distortion to the other channel, suggesting that one of these small-signal tubes had gone bad (a very rare occurrence, in my opinion). I asked distributor Kevin Deal for another set of 6SN7 tubes. Unfortunately, these didn't fix the problem, so we decided to restart the review with another sample of the ia21 (S/N 210221).

I performed a complete set of tests on the new sample from both the 4 and 8 ohm output transformer taps, with both the KT88 output tubes and the EL34 output tubes. In each case, the bias switch on the amplifier's left side panel was correctly set for the tube type. The maximum voltage gain into 8 ohms was very similar with either output tube and on the low side for an integrated amplifier, at 32.8dB from the 8 ohm tap and, surprisingly, slightly higher from the 4 ohm tap: 33.0dB. Both taps preserved absolute polarity (ie, were non-inverting), and the input impedance was very high, at 100k ohms or greater at all audio frequencies.

It was when I measured the ia21's output impedance that I ran into one of the amplifier's idiosyncrasies. The

conventional wisdom in hi-fi amplifier design for the past 50 years has been that the amplifier should behave close to a voltage source, with a sufficiently low output impedance that a loudspeaker's changing demands for current with frequency don't affect the amplifier's response. By contrast, the Mystère offered very high output impedances: 14 ohms from the 8 ohm tap and 7.5 ohms from the 4 ohm tap. (Both figures changed only slightly with frequency, and were not significantly affected by the type of output tube used.) In a different view of amplifier design, one that stems from telephony, you match the amplifier's output impedance to the load, which results in the optimal transfer of power to the load. Tubed instrument amplifiers tend to be designed according to this paradigm, but the Mystère's output impedance is almost twice as high as

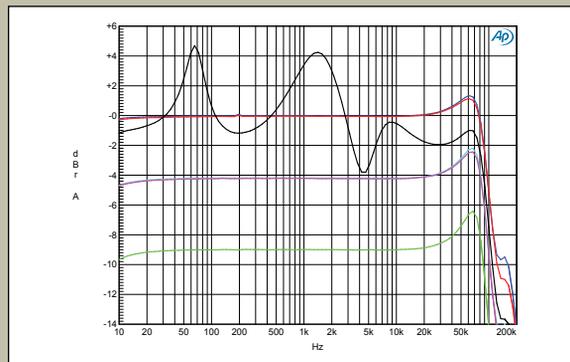


Fig.1 Mystère ia21, EL34s, 8 ohm output tap, frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta), 2 ohms (green). (1dB/vertical div.)

In addition to KT88s and EL34s, the ia21 will work with KT66s, 6L6GCs, KT77s, 6550s, and the new (to me) KT120s. Auto-biasing will let the hobbyist in you have a blast while keeping you from constantly having to tinker with your amp. The best of both worlds, I'd say.

"I am your father's brother's nephew's cousin's former roommate."

Setting up the Mystère ia21 was very easy, especially for a tube amp. Take it out of the box, plug it in, select the correct bias setting for the tubes being used, hook up a source and speakers, and turn it on.

The ia21 comes with a tube cage. Actually, *cage* is the wrong word—it's more like a tube *helmet*, with two long, skinny slits that provide the only venting for the heat produced by the tubes. The cage's possible inability to dissipate heat worried me, so I didn't use it. Nor did I like the way it looked. With the cage in place, it seemed as if the decapitated head of the Black Knight from *Monty Python and the Holy Grail*, or Rick Moranis's Dark Hel-

met character in Mel Brooks's *Spaceballs*, were sitting there on my audio rack.

However, with its cage off, the ia21 was one classy, sexy beast. I found its qualities of fit, finish, and build to be

The owner's manual is well written and informative. A quick peek under the Mystère's hood revealed a beautifully laid out design. The wiring was well done indeed, and even insulated

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beyond reproach. Though I'm not big into piano-black gloss finishes for my audio gear, I just loved the look of the ia21. That black gloss was inviting yet scary—I *knew* that if I touched this thing with my bare hands, I'd never get the smudges off. I was afraid that, after one touch, this pretty ia21 would look as if a snottosed two-year-old had gotten to play audio for the day. So while I find the entire idea of wearing white gloves to touch audio gear a sign of audio fetishism, I did use the provided white gloves whenever I had to touch the ia21.

with silk, I'm told. If this is how China can make audio gear, I don't see how anyone can find fault with it.

"I am here to fix ze problem viz yer pheaun."

After setting up the ia21 and letting it cook for a day or two, I sat down and gave it my first real listen. Something was not right. The sound was grainy and rough, the soundstage was not happening, and the frequency response seemed very lumpy. I switched to the 8 ohm taps, tried a different input, replaced the KT88

needed when viewed in this light. A third way of designing an amplifier is to make it have a very high output impedance, so that it acts as a current source; *ie*, it maintains the same output current into all load impedances. As high as it is, the Mystère's output impedance is too low for that paradigm to be in operation, however, so I am left mystified by the ia21's design philosophy.

The downside of this high impedance is that the response variations due to the Ohm's Law interaction between the impedance and the manner in which the partnering loudspeaker's impedance changes with frequency will be extreme. The gray trace in fig.1, for example, shows the amplifier's response from its 8 ohm tap into our standard simulated speaker (see www.stereophile.com/content/real-life-measurements-page-2). The response changes by

± 4.1 dB, which will very audible; in a sense, the Mystère ia21 will sound different with every speaker with which it is used. Even from the 4 ohm tap, with its lower output impedance, the variations are only slightly reduced in magnitude (fig.2, gray trace). However, by comparing fig.2 with fig.1, you can see that the lower-impedance transformer tap has a flatter response in the octave and a half above the audioband and that, in fact, the Mystère has a superbly flat, wide bandwidth from this tap. These two graphs were taken with EL34 output tubes; the behavior with KT88s was almost identical, other than the fact that neither the ultrasonic rise in response from the 8 ohm tap nor the small peak around 150kHz were quite as pronounced.

These response graphs were taken with the ia21's volume control set to its maximum. Commendably,

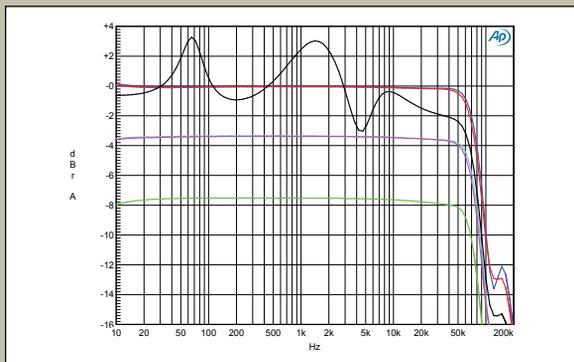


Fig.2 Mystère ia21, EL34s, 4 ohm output tap, frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta), 2 ohms (green). (1dB/vertical div.)

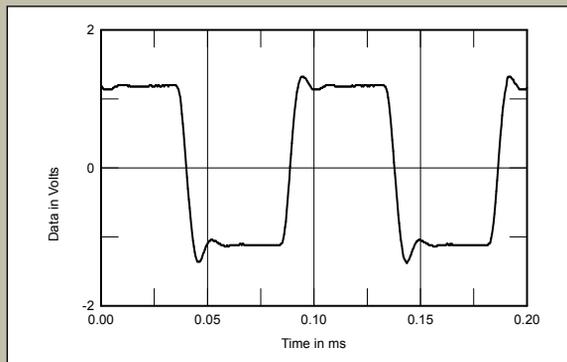


Fig.3 Mystère ia21, EL34s, 8 ohm output tap, small-signal 10kHz squarewave into 8 ohms.

tubes with EL34s, and let it cook a while longer. Still no dice. This was not the sweet-sounding amp I'd heard at CES.

Suspecting that the review sample had been damaged en route to my house, I shipped it to John Atkinson for testing to confirm what my ear was telling me. Indeed, the amplifier was busted: One channel was putting out 10 times the distortion of the other. (See "Measurements" sidebar.) After exchanges of e-mails with Kevin Deal and JA, it was determined that something had happened to the amp after it was tested at Mystère USA and before its arrival at my house, and a second sample was sent to me. All of my comments on the ia21's sound are based on that second sample, which worked perfectly.

With the new ia21 in place, I began the battery of trial-and-error tests to which I usually subject tube amps, to see how best they might work with my system's front-end, a Bel Canto DAC 3.5 with VBS power supply, and drive my Revel Performa F30 speakers. Sain Line Systems' Silver single-ended interconnects

gave me the most open, neutral sound—the ia21 didn't need the added warmth that copper interconnects tend to impart. Next, I determined that the ia21's 4 ohm taps gave my Revel speakers (nominal impedance 6 ohms) the most even tonal balance, the best dynamic range, and the least grainy highs.

"And oh how they danced . . . the little children of Stonehenge."

The Mystère ia21 offers a choice between KT88 and EL34 output tubes, and I had sets of both, made by

The sound was marvelous: extremely rich in harmonic colors, a nice, wide soundstage, and very even tonal balance. There was just enough tube magic in the midrange to make me smile, and the bass was reasonably controlled, if not nearly as dynamic as what I hear from the Rogue M180s—and not nearly as much as the Plinius SA103, which I will be reviewing in a future issue.

Though the KT88s offered fine, balanced performance, there was a certain thickness, an almost chunky quality to the music—it was all just a little too sump-

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Shuguang in China. I gave each output tube about 100 hours of playing time before switching back and forth between them to pick apart their sounds. I began with the KT88s, which offer more power and are similar to the KT90s I've been using in my Rogue M180 monoblocks.

As I wrote in my listening notes, "If music is a turkey dinner" (I wrote this around Thanksgiving), "then the KT88s are a yummy but thick gravy drizzled over the whole plate." Specifically, the KT88s added a bit of thickness in the upper bass, a slightly congested lower

measurements, continued

reducing the setting to 12:00 didn't change the ultrasonic bandwidth. The rise in response above the audioband from the 8 ohm tap results in a small degree of overshoot and a single cycle of ringing with a 10kHz squarewave (fig.3), which was only slightly reduced in amplitude from the 4 ohm tap. The small-signal 1kHz squarewave was superbly square (fig.4), the flat tops of the waveform confirming the excellent LF extension see in the frequency-response graphs. Channel separation was good rather than great, at about 80dB in both directions at 1kHz. This increased to 90dB at low frequencies, but decreased to 48–54dB at 20kHz, depending on direction. The ia21 was moderately quiet, its wideband, unweighted signal/noise ratio (ref.1W into 8 ohms with the input shorted but the volume control set to its maximum) measuring 68.7dB in the left channel, 71.6dB

in the right. These figures improved to 89.4 and 80.2dB, respectively, when A-weighted.

Figs.5–8 show how the THD+noise percentage in the Mystère ia21's output varied with power into 16, 8, and 4 ohms from the 8 and 4 ohm taps and with KT88 and EL34 output tubes. General points to be gleaned from these graphs: 1) the maximum clipping power is obtained when the load is matched to the nominal output transformer tap; 2) the distortion is low below a few hundred milliwatts into higher impedances; 3) the rise in distortion with power is worse with EL34s than with KT88s; and 4) the KT88s clip in a more abrupt fashion than the EL34s. With KT88s, the amplifier easily meets its specified power of 50Wpc into 8 ohms (17dBW) at 1% THD+N, but offers less power at that level of distortion with EL34s. However, the less sharp onset of clipping with EL34s means that, at

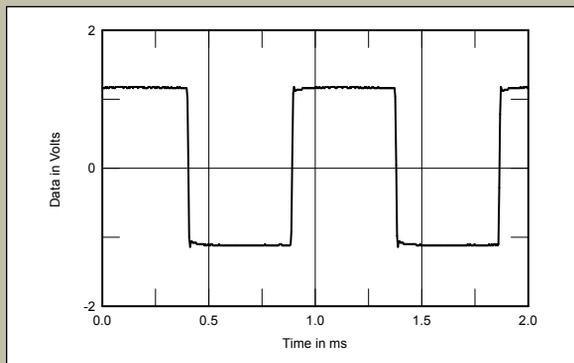


Fig.4 Mystère ia21, KT88s, 4 ohm output tap, small-signal 1kHz squarewave into 8 ohms.

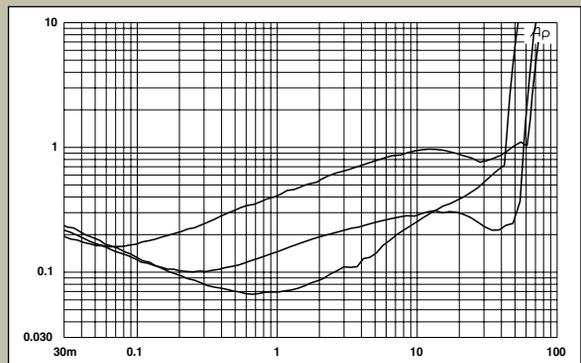


Fig.5 Mystère ia21, KT88s, 8 ohm output tap, distortion (%) vs 1kHz continuous output power into (from bottom to top): 16, 8, 4 ohms.

treble, and good but not great spatial separation between instruments. Don't get me wrong—the sound was lovely—but it was on the thicker, richer end of absolutely neutral.

This effect was very apparent as I listened to Robert Silverman playing Brahms' *Variations on a Theme by Handel* and Schumann's *Symphonic Etudes*, from a forthcoming *Stereophile* release that I'm producing. The piano sounded very full and rich, but Bob's dense left-hand work in the Schumann got a little claustrophobic, with bass notes sounding too full and smearing Schumann's thick writing. For kicks, I also tried a set of Electro-Harmonix KT88 tubes borrowed from a friend. These offered a bit less grain in the treble than the Shuguangs, but the thickness remained. Perhaps this effect comes from running the tubes in pentode—my Rogue M180s sound far more quick and lean with KT90s in ultralinear mode. The KT88s were particularly kind to thinner, brighter recordings, making Animal Collective's "My Girls," from *Merriveather Post Pavilion* (CD, Domino 219), sound great.

Don't get me wrong—I'd *always* prefer the richness of the Mystère ia21 with KT88s to some god-awful threadbare sound—but however pleasant the KT88s were to my ears, they did have a definite if lovely character. This is the sort of "problem" I wish more amplifiers had.

Then I switched to the EL34s. *Now* we were talking turkey. When the EL34s lit

KT88s—remarkable performance in this regard, especially considering the price. Soundstaging—width, depth, layering, projection—was excellent. So much music sounded so right through the ia21. For me, the EL34 tubes gave me harmonic color in spades, but also let the air in. The EL34s sounded like a successfully made soufflé; the KT88s' baking effort may have fallen.

THE EL34S SOUNDED LIKE A SUCCESSFULLY MADE SOUFFLÉ; THE KT88S' BAKING EFFORT MAY HAVE FALLEN.

up against the Mystère's black-gloss finish, so did the sound. Harmonically, at least in my system, these tubes really got it right. The chunky quality of the upper bass was gone, and the treble didn't bunch up as much in the 5–8kHz region. The top end was also sugar-sweet and silky, though maybe not the last word in terms of extension. Separation between instruments and notes was far greater than through the

Listening to Bob Silverman showing Brahms and Schumann who's boss was wonderfully engaging. Through the Mystère ia21 running EL34s, the harmonics of his piano were perfectly aligned with the fundamentals. I could hear how well Bob balanced homophonic chords so that the bass overtones aligned with the reinforcements in the right hand. Each note and melodic line retained its relation to

measurements, continued

a relaxed 3% THD definition of clipping, the ia21 delivers 67.5Wpc from the 8 ohm tap into 8 ohms (18.3dBW), or from the 4 ohm tap into 4 ohms (15.3dBW).

I have shown only one circumstance where I plotted the THD+N percentage against frequency into different impedances, from the 4 ohm tap with the amplifier fitted with KT88 output tubes (fig.9). The behavior is broadly similar from both taps with both kinds of tube: the ia21 is at its most linear into higher impedances in the midrange and low treble, with the right channel (red and magenta traces) not quite as well behaved as the left (blue and cyan). I had assumed that the rise in THD below 50Hz was due to the onset of core saturation in the output transformer, but the 2 ohm behavior (green) is better than that into higher impedances. The distortion also starts to rise a little in the top two audio octaves, due to the circuit's limited open-loop bandwidth.

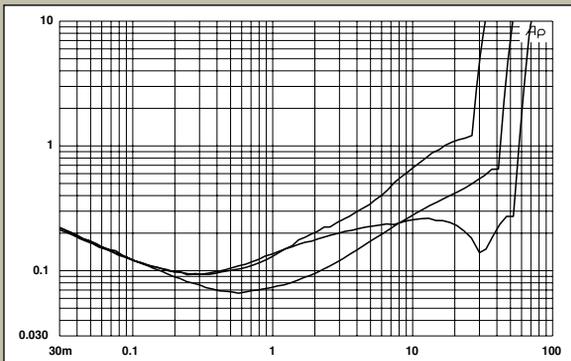


Fig.6 Mystère ia21, KT88s, 4 ohm output tap, distortion (%) vs 1kHz continuous output power into (from bottom to top): 16, 8, 4 ohms.

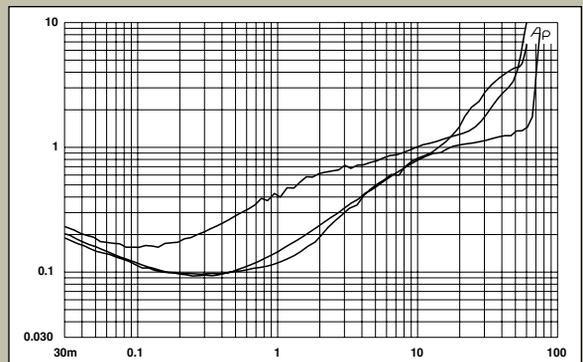


Fig.7 Mystère ia21, EL34s, 8 ohm output tap, distortion (%) vs 1kHz continuous output power into (from bottom to top): 16, 8, 4 ohms.

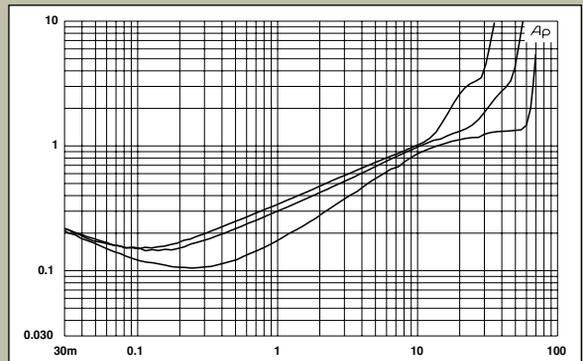


Fig.8 Mystère ia21, EL34s, 4 ohm output tap, distortion (%) vs 1kHz continuous output power into (from bottom to top): 16, 8, 4 ohms.

the whole, but also allowed the ear to easily separate it from the rest. Whatever my ear focused on in the music it was able to effortlessly hear—no easy feat! More than this, in the quieter passages I was able to hear Bob's concentration. The spaces between notes were filled with the silence of an artist thinking, feeling, shaping, emoting. I also swore I could hear JA and me silently rooting for Bob backstage in the control room. There's no way JA can measure whether or not the Mystère can reproduce the concentrations and brain waves of an artist and engineer and producer, but on my honor: I heard it.

Jazz sounded particularly good via the Mystère. Heck, Paul Desmond's *Bossa Antigua* (CD, RCA Victor 68689-2) sounded perfect. Jazz guitar is a tricky thing to get right, but Jim Hall's axe had the right amount of transient snap and amp glow. Desmond's alto sax sounded clear, full, and right in the room with me, while the sounds of Connie Kay's drum kit remained in great balance with itself and the other instruments. The bass was a little fat and full, but delightfully so.

Listening to this album was so engaging as this amp, again, showed its knack for playing the spaces between the notes.

The ia21 loved small ensembles of all kinds. Kronos Quartet's recording of Peteris Vasks' String Quartet 4 (CD, Nonesuch 79695-2) sounded very compelling. The Mystère really got the harmonic structure of the strings right, and I should know—I play the cello. The EL34s' generosity of tone gave the impression of even better dynamics than this recording probably has. Vasks' writing often alternates between sections of searing Jeremiaic lamentation and quiet moments of sublime beauty. The ia21 did a nice job of turning on a dime between these contrasting sections. Similarly, Ralph Stanley and the Clinch Mountain Boys' "Sinner Man," from *Cry from the Cross* (CD, Rebel REB-CD-1499), came alive, dynamically, tonally, and spatially. From my notes: "The effect on the music when played through the Mystère ia21 is like seeing a beautiful woman walking under the diffused light of a forest canopy; it's natural, slightly flattering, yet truthful."

While Peter Kruder's *Peace Orchestra* (CD, G-Stone GCD 004) lacks big dynamic swings, it does present almost constant low bass, and a complicated mix that involves the full audioband—the sort of music with which I expected the lower-powered Mystère to fall down. Not so, as long as I didn't push ia21 too hard. Though the bass was a little loose and woolly, the mix held together well, with a wonderfully wide soundstage and nice texture for each instrument. The treble was always in good balance with the rest of the mix, never sounding hard or coarse, or dull or lifeless.

I like big butts and cannot lie.

If, so far, this review has seemed an unqualified rave, that's because it is. Which means two things: 1) I'm going to be totally humiliated when JA measures the Mystère ia21 and scratches his head, wondering why I like it so much; and 2) There's gotta be a catch, a proviso, a caveat, a big *but* to all this positivity. Otherwise, why buy any amplifier other than the Mystère ia21?

measurements, continued

With both EL34 (fig.10) and KT88 (fig.11) tubes, the predominant distortion harmonic at low powers is the subjectively benign second, though FFT analysis indicates that other harmonics, decreasing in level with increasing order, are also present (fig.12). This graph also indicates that AC-supply-related spurious are present; repeating the analysis with a 1kHz tone at one-third power shows that both the fundamental tone and its harmonics have sidebands at the supply-related frequencies of ± 60 and ± 120 Hz (fig.13). The slightly worse linearity in the right channel can be seen, in fig.13, to be associated with a higher level of third harmonic than in the left channel.

Finally, the increase in linearity in the top two octaves seen in fig.9 doesn't result in a poor result on the high-

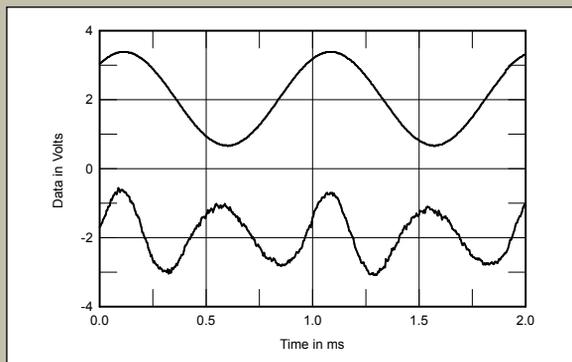


Fig.10 Mystère ia21, EL34s, 8 ohm output tap, 1kHz waveform at 1W into 8 ohms (top), 0.09% THD+N; distortion and noise waveform with fundamental notched out (bottom, not to scale).

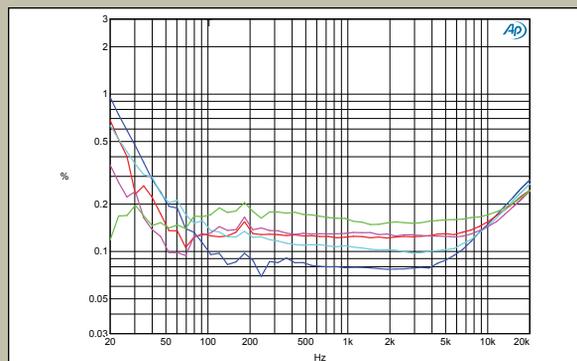


Fig.9 Mystère ia21, KT88s, 4 ohm output tap, THD+N (%) vs frequency at 2.83V into: 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta), 2 ohms (green).

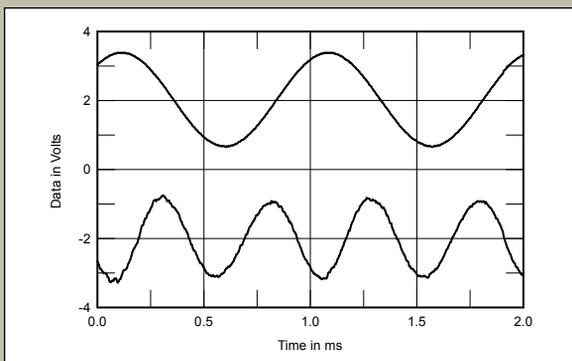


Fig.11 Mystère ia21, KT88s, 8 ohm output tap, 1kHz waveform at 1W into 8 ohms (top), 0.17% THD+N; distortion and noise waveform with fundamental notched out (bottom, not to scale).

Here's that big *but*: The Mystère ia21 is a 50Wpc *tubed* integrated amplifier. There are definite limits to its ability to play loudly, handle large dynamic swings, and reproduce concert-level performances in the home. When I pushed it moderately hard, the ia21 politely clipped, whether I was playing recordings of solo voices, big orchestral works, or rock with a wide dynamic range.

I'm one of those who believe that audio reproduction is an illusion. For some large-scale and dynamic music, part of creating that illusion is to play music at high volumes, and that requires amps that can play effortlessly at such levels. The Mystère ia21 just can't produce enough output to drive speakers of normal efficiency to levels that will convince you that a symphony orchestra is playing in your listening room.

That said, the ia21 *will* present a wonderfully musical reproduction of that music, but on its own terms, and at its own, more polite levels. In no way is this a criticism of the Mystère; it's merely a description of what it is: a small tubed integrated

ASSOCIATED EQUIPMENT

DIGITAL SOURCES Theta Miles (S/PDIF output), Bel Canto CD2 (with VBS1 power supply) CD players; Benchmark DAC1 & DAC1 HDR, Bel Canto DAC 3.5VB, CEntrance DACport D/A converters; Sony Vaio laptop computer.

POWER AMPLIFIERS Pass Labs Aleph 3 & XA30.5, Plinius SA103; Rogue Audio M180 monoblocks.

INTEGRATED AMPLIFIERS Pass Labs INT-150, Simaudio Moon i3.3.

LOUDSPEAKERS Revel Performa F30.

CABLES Digital: Stereovox HDVX, Silver Sonic D-110 AES/EBU, Wireworld Gold Starlight AES/EBU. Interconnect: Sain Line Systems Pure (single-ended). Speaker: Kimber Kable BiFocal X. AC: Sain Line Systems Reference—**Erick Lichte**

amplifier at a reasonable price. In my experience, to get this level of sound quality *and* the ability to drive power-hungry speakers to concert levels requires spending a lot more than \$2995.

It's no mystery.

I loved my time with the Mystère ia21. If you buy one, you will too. Of all the integrated amps I've reviewed in the last year—see www.stereophile.com/category/integrated-amp-reviews—the Mystère ia21 is my favorite, the least

expensive, and drew the least attention to itself, allowing me to focus on the music. It was just powerful enough to make me *mostly* forget about its dynamic limitations, and its tonal and spatial rendering of music was quite special—and even more special when you consider that it costs only \$2995. The Mystère ia21 combines the fun of tube rolling, the convenience of auto-biasing, classic and distinctive styling, great build quality, and rich, engaging sound. A great value, highly recommended! ■

measurements, continued

frequency intermodulation test. The difference product at 1kHz resulting from asking the ia21 to drive an equal mix of 19 and 20kHz tones at 10Wpc into 8 ohms from its 8 ohm tap lay at -66dB (0.05%) in the right channel and -74dB (0.02%) in the left (fig.14).

In most respects the Mystère ia21's measured performance is typical of a classic tube design using only a limited amount of global loop feedback, though its wide bandwidth is better than that of such designs. As to why Erick Lichte preferred the EL34 tubes to the KT88s, I must assume that it was due to the combination of a slightly greater degree of second harmonic coupled with the softer clipping characteristic. But I just can't come to grips with why (or how?) the ia21's output impedance is so extraordinarily high.—**John Atkinson**

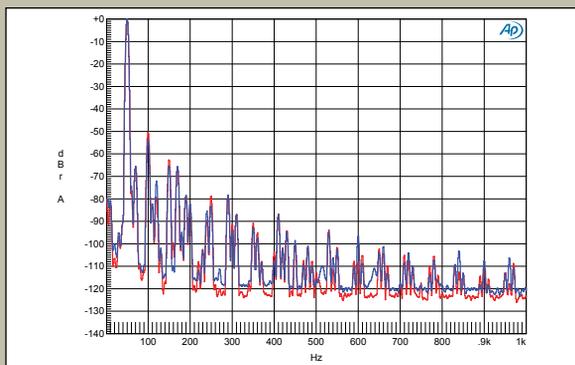


Fig.12 Mystère ia21, EL34s, 8 ohm output tap, spectrum of 50Hz sine wave, DC-1kHz, at 1W into 8 ohms (left channel blue, right red; linear frequency scale).

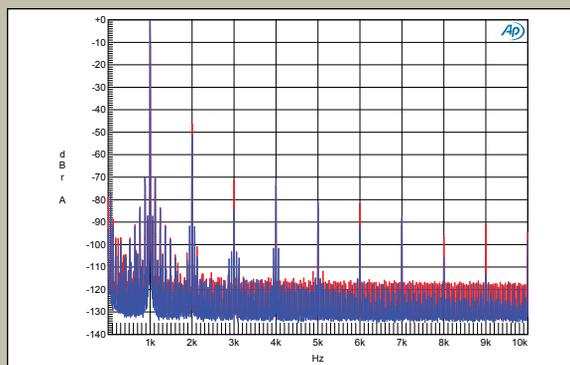


Fig.13 Mystère ia21, KT88s, 8 ohm output tap, spectrum of 1kHz sine wave, DC-10kHz, at 16W into 8 ohms (left channel blue, right red; linear frequency scale).

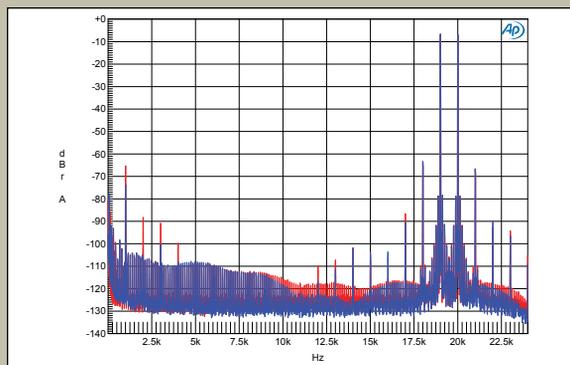


Fig.14 Mystère ia21, KT88s, 4 ohm output tap, HF intermodulation spectrum, DC-24kHz, 19+20kHz at 10W peak into 8 ohms (linear frequency scale).