

## Joule Electra LA-100 Mark III Line Stage

During my assessment of the VMPS FF3/SRE loudspeakers (review, Issue 121), a friend came over one evening and we found ourselves not so happy with the sound. We weren't hearing all of the detail we knew from familiar pieces, and the bass seemed a little disconnected from the midrange. So we substituted the Joule Electra LA-100 Mark III line stage I had just warmed up and sat back down to listen.

What I heard made my jaw drop and a big grin appear on my face and my friend had a similar experience. In all my years in High End audio, I cannot recall another single component that made as dramatic a difference. The system was transformed. Here was the detail we had been missing – only now there was much *more* of it. We were listening to "Constantinople" from Patricia Barber's *Modern Cool* [Prem-741-2], and I could hear the soft bite of the *rosin* on the bowed bass. Dynamic range increased significantly; each note and sound seemed to come to life, vivid and immediate. The music became more coherent and snapped into focus, with the bass seamlessly blending in. And most importantly, there was an emotional connection to the music that we hadn't felt before.

Now, the line stage we were using before switching to the Joule had only one single-ended output, requiring a "Y" connector to get the signal to the main amp and to the crossover for the bass amp (and probably compromising performance). So I wondered if my initial impression of the Joule would hold up over long-term listening and with other equipment in the system.

An earlier version of the Joule Electra preamp, the LA-200, was favorably reviewed in Issue 104, in 1995. The design of the LA-100 Mark III is nearly the same as the LA-200, with only a couple of differences. The tubed preamp still utilizes dual-mono, silver-hardwired, point-to-point construction. It is phase inverting since it utilizes only two stages instead of three with its "*mu* follower" circuit. Designer Judson Barber says this circuit is unique in that the cathode follower acts as a high resistance buffer between the B+ and the plate of the gain stage, allowing the tube to "see" almost an infinite resistance at the plate – this to enhance sonics and minimize distortion. The power supply is extremely high current, with 100 joules of energy storage. The LA-100 still uses pure DC for bias on the gain stage, furnished by two three-volt lithium batteries (said to have a five-to-ten-year lifespan in this application). But where the LA-200 utilized two 5751 lines tubes for the gain and cathode stage, in the LA-100, one is a 6350, a tube originally designed for computer use. The line stage has a "standby" mode, which keeps the tube filaments powered at all times. Barber recommends that the LA-100 be left on in "standby" when not in use, to extend tube life to the expected five to ten years.



The second difference is that there is only one remote-controlled volume and one balance control on the LA-100 rather than the dual controls (one for each channel) on the LA-200. The line stage has three outputs (including tape) and four inputs, all single-ended. Like its predecessor, the LA-100 is striking in appearance, with four polished brass knobs mounted on a shiny, thick, black-acrylic faceplate. And best of all, at \$3,495 the LA-100 Mark III is less expensive than the LA-200.

One of the primary strengths of this line stage is its ability to separate individual instruments and voices and preserve the characteristic harmonic and dynamic envelope of each. With the LA-100, when I listen to complex music, I am taken by all the different individual musicians and instruments in space – without "trying" to listen carefully or critically. This presentation reminds me of certain aspects of a live concert – I'm effortlessly aware of different instruments and voices, as my attention wanders from section to section, but I still maintain a connection with the primary line of the music. You can hear all of these things simultaneously, because each instrument is an individual sound in space with its own character, and not buried or smeared in the background. I am surprised this experience does not occur more often in listening to recorded music, but I find it unusual, and the Joule LA-100 Mark III exceptional in its ability to move you closer to this aspect of live music. Listening to "Veinte Anos" from the *Buena Vista Social Club*<sup>1</sup> [World Circuit/Nonesuch 79478-2], I was struck by how the voices of the two vocalists are portrayed so distinctly in space, each with its own character. Omara Portuondo is a little to the left of center and Compay Segundo is just to her right, in the center. As I listen to them sing, I am simultaneously aware of the sound, colors, and textures of the other instruments – guitars, a bass, percussion – as

<sup>1</sup> Don't miss Wim Wender's wonderful film of the recording of this music, even if you don't care for the material. It will make you a convert.



they weave in and out of the piece creating the ebb and flow of the music's dynamics – just as I would experience a concert in life.

Another aspect of the Joule line stage's performance that impressed me is the body and weight accorded to instruments and singers. Spatial reproduction in all planes is excellent and images are unusually dimensional. Edge definition of the instrumental images is appropriately diffuse so the sounds seem to emerge from their centers. The tonal balance is pleasing, just a shade warmer than neutral. Perspective is not too forward, so this seems natural. With its forgiving nature, the Joule is hard to beat when playing loud music, either rock or orchestral. I never heard a hint of harsh edge or glare, even though the line stage seems to have good transient speed, responding quickly to leading edges of notes. Massed strings, for example, have a lush tone but still come off sounding like violin strings.

In the earlier review, the LA-200 was criticized for losing definition in the bass as the frequencies went lower. I do hear that effect on the LA-100 as bass extends below 40 Hz or so, but the lower frequencies do not lose any of their power or dynamics.

My only real criticism is that there is some air and detail missing in the very top end, which diminishes the transparency in that region. The slightly warm balance favors the lower midrange, and often the very high frequencies sound a little closed in, giving the LA-100 a slightly dark character. There is a lot of high-frequency detail, but lower treble is favored over the extreme highs. Cymbals, bells, and other high instruments have plenty of shimmer and sparkle and a sense of body, but they lose some detail on the top. Listen to the cymbals on Massenet's *Le Cid* [Klavier KCD-11007] for an example of this. On this piece, I also hear less soundstage air, especially surrounding the castanets.

A comparison of the Joule with the similarly priced (\$2,995) ARC LS-16 line stage might prove instructive. The two are a good contrast; each is either a little on the Yin or Yang side of neutrality. The Joule sounds warmer, has more low-frequency energy and power, with better dynamic contrasts across the board. The ARC is more open and transparent, with greater upper-frequency energy and air. The LS-16 has an extremely silent and grain-free background, allowing more inner detail and low-level information to come through. But compared directly to the Joule, the ARC sounds a little brighter, leaner, and not as engaging.<sup>2</sup> I found I could be quite happy listening to either one of these units, but with each, I miss the complementary strengths of the other. So which one is better? With the ARC used only single-ended, I found the Joule preferable in providing a more accurate and involving reproduction of the music.

The ARC has more flexibility and its sound improves when utilizing its balanced inputs and outputs, possibly taking advantage of improved performance from the balanced modes of both the digital-to-analog converter and amps, but this comparison is not really fair since the Joule can only be used single-ended.

As I listened to this line stage over the past few months, my initial wild enthusiasm moderated to glowing admiration and respect. I auditioned the Joule LA-100 Mark III for some time before I inquired about its price, and when I was told what it cost, I was surprised. I'd assumed it would go for much more. This line stage is really something special. The way it captures dynamic contrasts and presents three-dimensional performers on the soundstage is something to be heard. I don't know if it approaches the state-of-the-art in these areas, because I have not yet heard the best. But I can say that in doing the things it does well, it is the best I have heard.



MIKE KULLER

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#### MANUFACTURER INFORMATION

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Source: Manufacturer loan

Warranty: Three years parts and labor

Price: \$3,495

#### ASSOCIATED EQUIPMENT

Theta Data Basic II Transport, Audio Alchemy Pro-32 (jitter reduction), Sonic Frontiers SFD-2 Mk II D/A Converter, ARC LS-15, LS-16 line stages; Manley Reference240/100s, Edge M-8 amps; Thiel CS-7.2, Green Mountain Continuum 2 speakers; Kimber/Illuminati Orchid and D-60 digital cables; Nordost Blue Heaven, Cardas Neutral Reference interconnects; Nordost Blue Heaven Power Transparent, Synergistic Research cables; ASC Tube Traps, Room Tunes, Shun Mook Room Tuning Disks, Black Diamond Racing Shelf and Cones, Seismic Sinks, Bedini Ultra Clarifier, Monster Reference Power Center HTS2000, CD Blacklight Mk II Mat, Finyl, Pro Gold

#### Scot Markwell Comments

I could argue here that if real music does not sound as sweet and fulfilling as it does through the LA-100, then perhaps it should, so beguiling and satisfying is the overall performance of this line stage. However, I would be remiss in my duties as a reporter if I did not note that although its *relative* dynamic contrasts are remarkably convincing, it falls just a bit short when asked to provide the last iota of "oomph" with software that contains this information. The last *f* in an *fff* is simply missing, and the music sails through ever so slightly robbed of the weight and explosive force, as well as the definition and punch in the bottom octave, that it has in real life. Also, the slightly forgiving and sweet nature that makes the LA-100 so easy to appreciate and live with, especially in the high treble, is the self-same trait that keeps one from determining the ultimate quality of a recording. On the one hand, I can joyfully listen, for the first time without fatigue, to Mantovani's over-bright *American Scene: The*

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<sup>2</sup> Previous ARC line stages at this price level (the LS-2B and LS-15) had even more of this sonic character, which I would describe as a leaner tonal balance, with the illumination of the midrange and upper frequencies.



*Musical of Stephen Foster* [Alto/London PS 182] at full concert volume, and revel in the breath-taking beauty and breadth of the string tone and proper scale of the orchestral stage, while at the same time being disappointed at the slight loss of full dynamic impact and weight with familiar recordings such as Verdi's *Otello* [OSA 13130], a Kenneth Wilkinson/Solti/Vienna Philharmonic London from 1977 and one of the classic Wilkie grand opera recordings. All my old Johnny & Edgar Winter albums sound *great*, with a warmth and sweetness that is entrancingly addictive; the problem is that the recordings themselves are a bit grainy, thin, and pinched-sounding – just not through the LA-100.

So we have here a conundrum: a line stage that nudges the state-of-the art in midband tonality, cohesiveness, and dimensionality, but one that falls a smidge short in terms of fully realistic dynamic contrasts and frequency extension at the extremes, and is a little too flattering and forgiving (actually additive in its sweetening effect) to recordings that are less than state-of-the-art. This is a sound that will appeal to many, and it is a pure pleasure to hear. *I really, truly love* what this thing does *right*. It is not, however, quite like the real thing, and I hope that Judson Barber can perhaps go back to the spellbook and weave the missing bits into the LA-100; then we would have here something extraordinarily special, and unassailable in most of the important musical ways.

## Avalon Acoustics Opus Loudspeaker

**A**valon Acoustics made quite a splash last year with their Eidolon loudspeaker, a product that in some ways broke through previous limits of loudspeaker performance. When properly set up and driven by electronics and sources of commensurate quality, the Eidolon is musically transcendent.

The Eidolon's high resolving power can, however, work against musicality if any associated components have a trace of glare or upper-midrange forwardness. The speaker is like a powerful microscope, exposing every upstream flaw. This characteristic requires that the Eidolon be driven by rather expensive amplifiers and source components. (I drove them mainly with Audio Research Reference 600 power amplifiers.)

When Avalon set out to incorporate many of the Eidolon's design elements into the more affordable Opus, they knew a \$13,995 loudspeaker couldn't be as finicky as the Eidolon. The Opus buyer is unlikely to own reference-quality power amplifiers. Consequently, designer Neil Patel must have wrestled with the problem of balancing the often mutually exclusive qualities of resolution and compatibility with mid-priced electronics.

The Opus looks so much like the Eidolon that one wouldn't be struck by the difference at a glance. With the two speakers side-by-side, the Opus is obviously smaller in every dimension, but that aside the two look nearly identical. Indeed, the design goal was presumably to deliver most of the Eidolon's performance in a smaller, less expensive product. To that end, the Opus employs the same 1-inch ceramic inverted-dome tweeter and 3.5-inch ceramic inverted-dome midrange as the Eidolon, as well as a similar midrange/tweeter crossover. The big difference is the woofer: The Opus uses dual 9-inch woofers, one of them down-firing, in contrast to the Eidolon's single 12-inch driver. The Opus' front-firing woofer is made from a Nomex-Kevlar composite; the down-firing unit from woven carbon-fiber.

Avalon won't divulge information about the crossover frequencies or slopes, but the Opus is a four-way design, meaning that the down-firing woofer operates over a lower frequency band than does

the front woofer. Both woofers are loaded in the same enclosure, which is vented at the cabinet bottom. Avalon prefers the term "non-sealed" to "vented," noting that the Opus' loading is not a conventional bass-reflex design. Avalon had long been a vocal proponent of the sealed box; the Eidolon (and now the Opus) represent a radical departure for the company.

As with all Avalon loudspeakers, the Opus' enclosure is thick and well braced. The faceted front baffle is a 4-inch-thick solid structure made from laminated medium-density fiberboard (MDF). The laminations are of different thickness to distribute resonances. Internal braces damp cabinet vibration, and the midrange sub-enclosure further supports the sidewalls. A doughnut-shaped Sorbothane structure isolates the woofer from the cabinet. The sidewalls, top, and bottom are all made from 1.25-inch MDF.

If you've never seen an Avalon loudspeaker, you're in for a treat; the finish is spectacular and every speaker in the line features the same exquisite level of craftsmanship. The veneers are carefully matched between left and right speakers, creating an elegant symmetry. Standard wood veneers are walnut, curly ash, and quilted cherry; premium finishes – which add \$3,400 to the price – include walnut cluster burl, myrtle cluster burl, and curly maple.

### Listening

I switched to the Opus after spending the previous year listening to the Eidolon. This experience threw into sharp relief the similarities and differences between them. Let's start with the similarities.

First, the Opus had a startling clarity and transparency in the midrange and treble that fostered the impression that, like the Eidolon, the Opus didn't produce a sound coming from two boxes; instead, the music hung in space with a palpability, immediacy, and directness of expression that I haven't heard with any other loudspeakers. Although others can disappear into the soundstage, the Opus took that feeling to the next level with its almost spooky presence.

On many recordings – particularly of improvised jazz – the feeling of living, breathing musicians at