

## Home Audio Equipment Review



June 2002

### Ayre Acoustics K-1x Preamplifier

by John Leosco

*"Just when I was nearly convinced an active preamplifier couldn't compete for top transparency honors, I heard the Ayre K-1x."*



My grandmother always had a saying on the tip of her tongue for any occasion: "A closed mouth catches no flies" or "A friend in need is a friend indeed." Years of experience developed her ability to throw timely verbal jabs that could make me feel like a prince or a complete moron, as intended. Oftentimes her words would bend my psyche and effectively pass along some of life's great lessons.

In my mind, the perfect preamplifier routes a signal to the amplifier that's identical to the one provided by the source component, and I control the volume. It's essentially an adjustable gain device with complete transparency at any level setting. And as long as we're dreaming, let's wish for lots of inputs and outputs and remote-controlled everything. To this fantasy, Grandma might utter "You can't have your cake, and eat it too," meaning that some give and take are required for all good things.

God knows I've tried to find the Holy Grail of preamps. No matter how musical or refined each passing contender appeared, every active preamplifier I auditioned possessed a fatal flaw. Some were dark or excessively rolled off at one or both frequency extremes. Others smeared or lost delicate harmonics. A few were hyper-detailed at the expense of the big picture. Grandma was right -- perfection is impossible and approaching the ideal comes at a great cost. Even my unconventional Melos SHA Gold, run passive, sacrifices some dynamics for crystalline clarity, but for years its sound seemed to be an acceptable compromise.



### Review Summary

**Sound** "Tonal neutrality combines with precise microdynamics to paint an accurate, clean instrumental portrait. No added warmth, coloration, or sweetness are perceptible." "The K-1x always remains very true to the source."

**Features** Fully balanced dual-mono remote-controlled solid-state design with outboard power supply.

**Use** Remote control only has buttons for volume up or down and mute (and one for operation of the Ayre V-1x amplifier).

**Value** "You won't find one in the bargain bin," but "simply the finest-sounding line-stage preamplifier" John has heard.

Just when I was nearly convinced an active preamplifier couldn't compete for top transparency honors, I heard the Ayre K-1x.

### **It's not the wrapping on the package but what's inside that matters**

One glance inside the K-1x reveals a peculiar design. A single circuit board mounted vertically and completely covering the rear panel routes the signal from input to output and minimizes the length of the signal path. The circuit board is divided into left- and right-channel halves, and each fully balanced channel requires two sections of volume control (in phase and out of phase). Four expensive 46-position Shallco stepped attenuators with self-cleaning solid-silver wipers and contacts modulate the output level in 1dB steps over much of the usable adjustment range. Pulleys surrounded by a toothed belt link the radical volume controls together. Input switching is performed by a similar mechanical interface.

Utilizing an all-FET solid-state gain stage, including precision Roederstein resistors and custom-made capacitors, the K-1x gives 16dB of balanced gain with no negative feedback. Unbalanced outputs invert absolute polarity and utilize half of the Ayre's balanced output signal, resulting in a 6dB gain reduction. Input impedance is manufacturer-specified as 10k ohms (each phase) and output impedance as 300 ohms (also each phase).

The stocky and somewhat pedestrian main unit measures 18"W x 11 1/2"D x 5 1/2"H. Its thick aluminum front panel offers only a large volume knob, manual rotary input and record-out selectors, a mute switch, a status LED, and the remote-control sensor. The three-color LED glows red during power up, green when muted, and a beautiful blue during play. Around back, three pairs of balanced inputs, three pairs of single-ended inputs, and one pair of single-ended record outputs terminate on solid jacks. Two pair of balanced and one pair of single-ended outputs may be used simultaneously if desired.

Ayre's external power supply connects to the main K-1x preamplifier by a 7' Cardas-sourced umbilical. The 13"W x 8"D x 3"H black box holds four elements: one power transformer, two smaller toroids working as chokes, and a non-magnetic RF filter for the incoming power. Gallium-arsenide-based high-speed Schottky rectifiers work to produce clean DC power for the main chassis. A multi-pin connector for the umbilical and an IEC mains socket are the only distinguishing features found on the power supply. The two-box K-1x tips the scales at 45 pounds.

Despite Charles Hansen's (Ayre's research director) almost fanatical drive to design a supreme preamplifier and power supply, he admits no power supply is perfect. Hansen favors fully balanced operation for audio applications to primarily cancel *power-supply noise* before it's passed on to the output signal. He thinks, "All other conditions being equal, single-ended operation gets you roughly 98% of the way there, but all-balanced circuitry picks-up the last 2-3%."

All of this innovation will set you back \$7000 USD for a remote-controlled K-1x, \$6750 for the line stage sans remote. An optional moving-magnet/moving-coil balanced phono stage may be installed at a \$1600 premium. The milled aluminum remote adjusts output level by cycling a motor belted to the volume mechanism. The only other buttons on the infrared remote will mute the K-1x preamplifier or operate an Ayre V-1x amplifier, should you

happen to have one of these amps lying around.

### **The chain always breaks at the weakest link**

Ironically, the Ayre preamp was evaluated in an all RCA-terminated system consisting of a PS Audio Lambda CD transport feeding either a Dodson Audio DA-217 Mk IID or a Theta DS Pro Basic IIIa processor. Amplifiers were an Ayre V-1 and a Krell KSA-150 powering B&W 801 Nautilus loudspeakers. An Illuminations D-60 digital cable and AudioQuest Diamond and Opal interconnects linked the components. Speaker cables were Synergistic Research Resolution Reference and JPS Labs Superconductor+ Petite. An API Power Wedge 116 conditioned AC power to the front-end.

### **Beauty is in the details**

From the start, I was impressed at just how tonally pure the Ayre K-1x is. Trumpets simply sound like trumpets, and saxophones sound like saxophones. Tonal neutrality combines with precise microdynamics to paint an accurate, clean instrumental portrait. No added warmth, coloration, or sweetness are perceptible. Now, I'm not saying the Ayre K-1x isn't warm or sweet -- it can be both, and it can be neither. The K-1x always remains very true to the source.

Cassandra Wilson lays down some distinctive vocal tracks on *New Moon Daughter* [Blue Note CDP 532861], and this diverse, well-recorded album also proved an effective showcase to display the awesome transparency and extension of the Ayre K-1x. "Solomon Sang" begins with several near-subterranean lower-octave thrusts, and the strong bass lines on the entire disc are rich, dynamic, and controlled. *This* is excellent, honest bass. At the other extreme, strikes of bells, chimes, and other metallic hardware resonate clearly and with perfect focus. Cymbals shimmer with plenty of surrounding air. The K-1x's highly refined treble never came across as excessively hot or fatiguing.

Moving toward the mids, Wilson's deep vocals hover between the speakers with intonations clearly communicated. Her warm voice projects from a stark background, enhancing the sense of depth and realism, another tribute to the resolving power of the Ayre K-1x. Lots of different strings get stroked or plucked on this album, including acoustic, electric, resophonic, and octave guitars; banjo; violin; and even an Irish bozouki. Each strike contains the virgin fundamental tone, resulting in harmonics of vibrating fiber and instrument, and all of the snap and bite you'd expect from the real thing. The resulting music is a combination of purity, smoothness, dynamics and emotion. Splendid!

Complex arrangements with plenty of spatial data clearly demonstrated the most significant divergence between the Ayre K-1x and my Melos SHA Gold: image focus. From the Pretenders' *The Isle of View* [Warner Bros. 9 46085-2], Chrissie Hynde's great vocals are accompanied by no less than guitar, drums, bass, string quartet, and the occasional hit of a tambourine. Yet, what should be chaos from two channels becomes a wall-to-wall integrated symphony of sound. Realistic applause surrounds the performance at song's end, and the huge soundstage easily extends 180 degrees, in line with my ears, through either preamp.

But here's the difference: From the K-1x, Hynde's voice plainly appears from a softball-sized, more three-dimensional core near center stage. The air surrounding her vocals extends approximately three feet across the soundfield. With the Melos, the same delivery emerges more diffusely, with air scattered from amp to amp, a distance of five feet. Horns and vocals from other discs gave similar results, with the Ayre's focused image consistently just about half the size as the one from the Melos. Although I prefer the Ayre's rendition in most cases, I questioned which preamp is right.

Recently, I had the privilege to hear Marcus Roberts and his Trio live with the Utah Symphony at Abravanel Hall in Salt Lake City. The conductor's box was moved rearward, with Roberts seated at stage center, his piano extending to the right. Roland Guerin (bass) and Jason Marsalis (drums) were just to the left of Roberts. The orchestra was arranged in conventional fashion. I've heard live jazz before, but never in such an acoustically refined setting. I took my central seat, 30 rows back, with (among other things) the "image focus" question on my mind.

Once the music started, I found it difficult to focus on anything other than total immersion in the experience, but I was shocked to learn just how closely the individual sounds seemed to outline their points of departure from many instruments. As the Trio played, Roberts' piano was completely surrounded by rich harmonics, yet clearly separate from the bass and drums nearby. Every keystroke contained its own individual ring within its own space. Only the sheen from the cymbals carried from stage right to stage left. Solo clarinet, trumpet, trombone, and saxophone from the Utah Symphony were equally focused and harmonically developed. With the entire orchestra rising to full tilt, a wall-to-wall wave of lush sound filled the hall.

Music through the Ayre K-1x resembles what I heard that night. But now I have a new question: How do we design a recording/playback chain to resurrect completely the real event?

### **Beauty is in the eye of the beholder**

Comparisons? OK, the Ayre K-1x betters the Melos SHA Gold, period. The Ayre is every bit as transparent as the passive unit, provides much tighter focus, and can still throw a large soundstage when one is present in the recording. One small detail -- while comparing these two units, levels matched, the Melos passed along an additional gasp of light, billowing air around cymbals. No, the K-1x isn't rolled off on top or anything like that, and its re-creation of percussion and cymbals is highly realistic. I found the K-1x's treble to be a synergistic match with my B&W Nautilus loudspeakers.

Moving on to a unit more similar to the K-1x, I reviewed the Conrad-Johnson Premier 18LS a few months ago, and it was interesting to contrast it with the Ayre. First, and most importantly, the K-1x and the 18LS, both utilizing no tubes, share an intrinsic musicality. This is not a trivial point. Some technically competent preamplifiers lose essential pieces and parts, and sometimes the soul of the music, as the signal passes through. I enjoyed listening to both the Ayre and the C-J, but with that said, these are two very different preamplifiers.

With the Conrad-Johnson Premier 18LS and its easy-going way with music almost every CD sounds good, even some from circa 1980. Its major strength is a special, rich midrange from which harmonics can bloom in all directions. Solo piano sounds great. Images are less focused and blend together even more than with the Melos, at times creating a continuous soundfield. The Premier 18LS does filter somewhat the absolute frequency extremes and gives up some transient impact, but who cares? Just sit back, relax, listen, and enjoy.

On the other hand, the very best recordings and the Ayre K-1x bring me closer to a live musical event. Tonal purity and precise dynamics are a great combination. While some smoothness and refinement keep the Ayre from falling into the "ruthlessly revealing" camp, bad discs still sound, well, bad. And they should. On first listen, especially after spending time with the 18LS, I thought the K-1x might be a bit lean in the mids -- there was a lack of bloom. Now, I'm convinced the Ayre is more accurate. All the harmonics are there, just within tightly packed, more concentrated and deeper images, and this realistic image focus in no way jeopardizes a wide, deep soundstage. When the Ayre K-1x fits the system, as it did mine, no sonic weaknesses are noted.

Functionality further differentiates these two preamplifiers. The K-1x was designed to optimize balanced operation with single-ended connection as an option, and the 18LS is solely single-ended. C-J offers source selection, balance, and a theater throughput, in addition to volume and mute, all via remote control. The Ayre's remote only adjusts volume and mutes the preamp. Balance control does not exist on the K-1x, and I had to pry myself from my listening chair to swap sources (consider it part of my new fitness plan). LEDs clearly display output level on the 18LS, while counting marks and clicks is required to repeat levels from the K-1x. The innovative design responsible for the Ayre's sonic virtues results in some lack of creature comforts.

### **The verdict**

I've probably said enough already. The Ayre K-1x reproduces music in a highly transparent and natural way, with balance and extension. Some will like its honesty and others won't. I suggest listening to one, if only as a point of reference. And yes, bring your checkbook.

The K-1x is simply the finest-sounding line-stage preamplifier I've heard in my system, both drawing me into the music and closer to the actual event. I can only whine a little regarding its modest features, and you won't find one in the bargain bin. What to do? To this, Grandma would say, "Always buy the best you can afford, and you'll never be disappointed later." That's good advice.

*...John Leosco*

[johnl@soundstage.com](mailto:johnl@soundstage.com)

#### **Ayre Acoustics K-1x Preamplifier**

**Price:** \$6750 USD for line-stage version without remote control, \$7000 with remote; \$8600 with remote and MM/MC phono section.

**Warranty:** Five years parts and labor.

Ayre Acoustics  
2300-B Central Avenue  
Boulder, Colorado 80301  
Phone: (303) 442-7300  
Fax: (303) 442-7301

E-mail: [info@ayre.com](mailto:info@ayre.com)  
Website: [www.ayre.com](http://www.ayre.com)

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