

Audio Research Reference 6 Preamplifier

by Dennis Davis, July 14, 2016

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One of the great advantages a company that has been building top-quality audio gear for decades enjoys is that its base of potential and actual customers has been expanding for a very long time. Few high-end companies have been building a customer base longer than Audio Research Corporation (ARC). Many audiophiles in the 1970s could not afford to actually buy Audio Research electronics and had to make do with reading about the gear and lusting after it. But they never forgot their dream, waiting out the years, during which they increased their earning (and spending) capacity. Ten, twenty or thirty years later, those dreamers stopped reading and went shopping, turning Audio Research into one of the powerhouses of the audio industry.

The audio industry grew from hobbyist roots in the 1950s, when home entertainment meant listening to music or radio programming in the living room on an entertainment console or trying to dial in snowy reception on new technology -- the television. Obviously

there was no Internet, e-mail, 24-hour news, video games or home video to further distract anyone. The male of the species often escaped to a man cave that, in those days, consisted of a workshop in the basement or garage. To fill up the empty hours, many music lovers turned to building speakers and electronics in their basement workshops. Of those, a select few turned their hobby into a day job. William Zane Johnson, founder of ARC, was one of the lucky few who succeeded at doing this. He designed electronics in the 1950s, and then opened a specialty audio retail shop in the 1960s. In 1970, he founded ARC and by the mid-'70s his products had become legendary in large part because of their recognition by Harry Pearson of *The Absolute Sound*, which was founded the year after ARC. For most young audiophiles/music lovers in the late 1970s and the 1980s, Pearson's tantalizing reviews of Audio Research tube preamplifiers were like catnip. *One day, they dreamed, I can stop modifying Dynaco or Heathkit and own an Audio Research.*



From its inception, Audio Research established its reputation as the developer of some of the finest preamplifiers available. Although the company manufactured and sold more than just preamplifiers, the core of the company's reputation was built around its tube preamplifiers. Ever since 1973, when the SP3 was introduced, Audio Research has set the bar for preamplifier performance. The Reference series began in 1995 and is now in its sixth full iteration of one-chassis models. On two occasions, ARC could not contain its best preamplifier ideas in one box and stretched out its designs to two boxes, first with the Reference Anniversary and then with the Reference 10. But these projects were as much laboratory experiments as end products, breeding trickle-down improvements to ARC's one-box designs. The Reference Anniversary gave birth to the Reference 5 SE, and now the two-chassis Reference 10 has given rise to this new single-chassis design.

Which brings us to the age-old question: *another* ARC preamplifier? The history of the Reference series parallels the temporal history of the Internet. Before the Internet, the roll out of a new product was a very deliberate affair, with press releases and print-magazine coverage. In today's world, news of an *impending* product release can saturate audiophiles' attention spans before the physical product actually appears, which of course is long before more than a handful of people have actually listened to it. The Internet gives rise to people with three reactions: those who will never be able to afford a certain product start complaining about how the company is coming out with a new product because (they grumble) sales of the last one are slowing; less skeptical consumers rejoice that the used market will soon be filled with bargains of the prior model, put up for sale by buyers of the new model; then, of course, there are the audiophiles who support the industry by buying new products. Audio Research, sensitive to this paradigm, has somewhat defensively claimed in their product literature that the Reference 6 ". . . is not simply a market-driven product." In other words, there is more

on offer with this new version of the one-box Reference preamplifier than a pretty face.

That said, you can't help but immediately notice the new styling, which has been transforming Audio Research designs since the company's acquisition by Italian holding company Fine Sounds (which has now "evolved" into WOM, World of McIntosh). The new back-to-the-future look of the buttons and knobs takes some getting used to for anyone who has followed Audio Research over the years. My first reaction to the new designs, long before the appearance of the Reference 6,



was less than enthusiastic, but I've warmed to the look and now would probably find the old styling anachronistic were it to reappear in the company's lineup. What took no time to adjust to was finding the volume control moved from the left side of the Reference 5 SE panel to the right side of the Reference 6 panel -- where God intended volume pots to reside. With the Reference 5 SE, it took months to train my hand not to try and adjust the volume on the right side. With the Reference 6, just one use of the right-side volume adjustment was all it took.

The left-hand knob is now the input selector, which also deviates from the Reference 5 SE function set. Prior generations of the preamplifier used preassigned inputs and designated rear-panel inputs. So you would use the input selector to find, for example, the phono input, which corresponded to a specific input labeled Phono. With new assignable-input names, you can assign as many inputs as you wish to Phono, limited only by the four single-ended and four balanced inputs. The input designation is selected using a menu tree. In addition to input naming, the menu tree is used to control the tube-hour counter and display brightness. Additionally,



it can be used to program an automatic volume reset specific to each input setting and to set up a processor mode if the unit is integrated into a video or surround-sound system, where a secondary volume control is used. Finally, the menu tree controls a new auto shutdown function, incorporated to comply with a European consumer-electronics requirement. The default setting incorporates this function, which means if you accidentally leave your system on, the preamplifier will automatically shut down after an assigned period. I found that leaving this function active caused shutdown during regular use. After turning off this (in my mind, useless) function in the menu tree, the problem disappeared. Like other ARC Reference products, the Reference 6

acrylic bottom plate (the Reference 5 SE had an acrylic top cover) is also aimed at more efficient dissipation of electrical and mechanical energy. The rigid metal base includes a large cutout for this acrylic cover. The stock Audio Research feet are connected to the metal bottom chassis with the 15" x 11" acrylic plate covering the opening. The new bottom acrylic plate covers much of the unit's base, which means that if you want to support the unit on aftermarket products such as those from Nordost, Stillpoints or Harmonic Resolution Systems, removal of the stock feet may be necessary to make a solid and stable metal-to-metal contact.



accepts a power cord with a 20-amp IEC connector. The rear panel provides two sets of mains outputs and one set of record outputs. Each of these outputs allows a choice between RCA and XLR connection.

If you are used to a Reference 5 SE or any previous ARC Reference preamplifier, the gain setting of the Reference 6 will take some getting used to. ARC switched over to a new sonically improved volume chip set and adjusted the volume taper rate. The overall maximum gain is the same, but you will be at a different numerical setting to achieve the comparable volume. By way of comparison, a volume setting of around 40 on the Reference 5 SE corresponds to a setting of about 30 on the Reference 6.

In addition to the changed look of the faceplate, the Reference 6 has a new heavier, more-rigid chassis. The beefier side panels don't just look better (and more expensive), their construction is said to create a kinetic energy sink to drain away vibrations associated with the components inside the unit. Similarly, the addition of an

Inside the chassis, the tube count in the analog section has been increased from four 6H30 tubes to six. The tube count in the tube-regulated power supply remains the same, although the circuit is a new design, as are the circuit designs throughout the unit. A larger power transformer, built to Audio Research's specifications, brings the total weight up to 37 1/2 pounds, a 7-pound (or 23%) increase in weight over that of the Reference 5 SE. Cramping all those extra and upsized parts into the new

frame required a slightly larger case than that of the Reference 5 SE -- an inch deeper and almost an inch higher. The Reference 6 is priced at \$14,000 -- \$1,005 more than the Reference 5 SE. ARC has kept the increase modest compared to the added parts and technology.

As with all of its products, Audio Research claims that the Reference 6 needs a hefty amount of playing time to break in fully, meaning that you can expect it to keep improving over that time and plateau only after 600 hours. That period is not linear, however, and the biggest improvements manifest themselves within the first 250 hours of break-in, with a gradual change over the balance of the 600-hour period.

However, it wasn't necessary to wait for the 250-hour mark to hear just how dramatic the improvements are with this new generation of Reference preamplifier. While the change from Reference 5 to Reference 5 SE was significant, that upgrade manifested itself on a micro level -- improvements to the way the music was organized



and structured, bringing out nuances of recorded music glossed over by most preamplifiers. Turning to the Reference 6 (once I had sorted out the change in the volume-control gradations), the first thing that was obvious was a significant increase in bass energy and dynamic speed and intensity. In fact, the word "obvious" seems like a bit of an understatement, because my first and most immediate impression was that I had substituted not just a new preamplifier but a more robust amplifier as well. And maybe someone had sneaked into my listening room during the night and subtly inflated the two 7" woofers in each of my speakers, making them into drivers that were, at risk of being politically incorrect, a bit more masculine.

This transformation was evident from the first powering up of the preamplifier, while I was running it through its paces just to be sure that it was functioning. Even on some gentle background music that I had thrown into the CD transport, the new levels of grip and, for lack of a better term, self-confidence were obvious, such that I skipped the normal 250 hours of background break-in music and began cueing up my most challenging rock LPs -- music that had sometimes seemed emasculated by my system for lack of truly large speakers.

I fed the Reference 6 a good dose of Led Zeppelin and *Who's Next* [Track Deluxe 2408 102], LPs that sound truly impressive on systems larger than I can comfortably fit into my home, but records that always seemed to run out of steam with any speaker under 200 pounds per side. With the Reference 6, my 97-pound-weakling Avalons no longer feared having sand kicked in their faces by brutish rock 'n' rollers. The system's grip and bass extension were a significant improvement over the Reference 5 SE's. While these seemed to improve incrementally with each step from the Reference 3 to 5 and then 5 SE, the Reference 6's improvement in these areas was markedly greater than from any previous step in the Reference line.

Did the Reference 6's injection of testosterone into the system detract from its predecessor's more feminine charms? While the Reference 6's thrust and bass definition were most obvious, its greater (and more subtle) achievement may lie elsewhere. Once the unit was broken in, I turned the focus toward more introspective fare. One of my longtime favorite recordings is of Arturo Benedetti Michelangeli playing Beethoven's First Piano Concerto under the direction of Carlo Giulini. However, until last year, I had only listened to the original LP [Deutsche Grammophon Gesellschaft 2531 302]. On a recent visit to Roy Gregory's listening room, he was playing the CD version [Deutsche

Grammophon Gesellschaft 449 757-2], coupled with the same forces playing the Third Piano Concerto, and this CD has now become one of my references for sizing up CD players and electronics.

More than virtually any other CD, this recording will tell you, within a couple of minutes, just how much magic is being extracted by your system. At Casa Gregory, I first heard the Michelangeli CD played through an ARC Reference 5 SE and a variety of CD players,

with results ranging from plodding and congealed to (with the Neodio Origine) magical. At their best, the soft opening bars floated on air, and the frequent changes of key were not only obvious but also compelling, with a soundstage that was not only large but also continuous. Back home, playing the music on the same CD player and preamplifier combination, the magic of the performance and the recording survived the move to a smaller room and smaller speakers without losing any magic. However, there was more magic in the digital pits waiting to be extracted. Substituting the Reference 6 for the Reference 5 SE some months later demonstrated just how important the preamplifier is to the reproduction chain. Like the lungs of a living animal, the sound of the Reference 6 seemed to breath deeper, allowing a lighter touch and greater level of nuance than its older sibling.





One of my favorite orchestral recordings, and one I always reference when evaluating a new piece of equipment in the LP playback chain, is the two-LP set of Salvatore Accardo interpreting Paganini with Charles Dutoit leading the London Philharmonic Orchestra (*Diabolus In Musica* [Deutsche Grammophon Gesellschaft 00289 477 6492]). This now-out-of-print set is a compilation of recordings made in 1996. Its sound is not absolute, in the sense that it doesn't reproduce what you would hear in an ideal seat of your favorite symphony hall. It places the soloist much closer than that and, like many orchestral recordings, spotlights the violin so that the listener will not miss the slightest gesture of the soloist. But it's recorded so well and the music is so exciting that you don't care. The orchestral stage is huge -- what it might sound like up close and personal.

Before hearing it played with the Reference 6, however, the orchestra seemed to play second fiddle to Accardo's violin. It's as though the recording engineer had thanked Dutoit and

the orchestra for showing up, but decided it was really Accardo the audience wanted to hear. With the Reference 6, however, the orchestra was for the first time brought equally into the equation, and the music came across more as an integrated partnership between soloist and orchestra. It did not provide any additional upper-register extension to that of the Reference 5 SE, but the increase of microdynamic rhythmic expression made the whole thing hang together better than I've heard it before.

I had a similar reaction to what the Reference 6 accomplished with another orchestral super disc you will not find on any list, Albinoni's *Concerti Opus 7* played by the Berlin Chamber Orchestra conducted by Vittorio Negri [Eterna 8 26 678/679], one of the gems of the Eterna catalog. The difference between an enjoyable reproduction of these dozen concerti for violin, oboe and string orchestra and one that is truly exciting is all down to timing. Stepping up from the Reference 5 SE to the Reference 6 added an ingredient to the performance that just made it more exciting -- "What a

ride!" as I wrote in my listening notes. In addition to refining the rhythmic drive, the new preamplifier created a bigger picture of the performance, not just in width and depth, but also, more importantly, in saturation of tone and dimension.

The advantages to a truly superb preamplifier are not limited to highlighting the virtues of well-recorded music. It can also add dimension to mediocre recordings while at the same time exposing their limitations. Every couple years, I revisit one of my favorite Byrds albums, *Sweetheart of the Rodeo* [Columbia CS 9670], hoping that time will improve one of Roy Halee's lesser achievements as a recording engineer. The sound of this LP never seemed to gel before. Knowing that Halee recorded *Sweetheart* but

recognizing that it sounds like a poor cousin to Halee's Simon & Garfunkel recordings, I always hoped for more from the recording. With the Reference 6, the mix came together like never before.

Although the microphone does not sound like it loves Gram Parsons' voice as much as those of Artie and Paul, and the depth and soundstaging are not on par with Halee's best work, the Reference 6 made the Roy Halee touch obvious as never before, pulling the timing and texture together to help deliver that magic without hiding its shortcomings.

What the Reference 6 also does with pop recording is separate the wheat from the chaff. Listened to in isolation, Neil Young's 1992 release *Harvest Moon* [Reprise 9352-45057-1] is a nice-sounding LP, but its shortcomings come unraveled comparing it to Young's 2000 release *Silver & Gold* [Reprise 9362-47305-1]. For good or ill, the Reference 6 laid bare the differences between the two. *Silver & Gold* was much more dynamic, making *Harvest Moon* sound dynamically compressed with unnatural reverb in comparison to the more natural 2000 release. Going back and listening to the records through the Reference 5 SE, the differences are evident, but it took the greater refinement of the Reference 6 to throw them into such stark contrast.





Everything the Reference 6 does better than its older sibling became crystal clear listening to a world-class jazz recording like Music Matters' reissue of Lee Morgan's *Candy* [Music Matters/Blue Note 1590]. I know that Audio Research's Warren Gehl was quite taken with a handful of these wonderful Blue Note reissues, and he's the guy responsible for voicing the Reference 6, so I had every expectation that *Candy* would shine on the new preamplifier, and my expectations were exceeded. These 45 rpm mono

would set in, and the dimensional mono soundstage, as well as luscious instrumental timbres, were candy indeed with the Reference 6 in control.

Where does all of this leave those looking for a top-drawer tube preamplifier? For baby-boomers still scratching that itch to own an Audio Research preamplifier, the Reference 6 is an easy choice. For someone looking for the best one-box preamplifier that less-than-crazy money can

buy, the Reference 6 has little competition. And even princes and monarchs with unlimited funds may just decide that the Reference 6 delivers everything they need without spending two or three times as much.



LPs are the epitome of how good a mono record can sound, and the sound was never so potent as it was played through the new Reference 6. It felt as though I could push the volume to uncomfortable limits before distortion

I've listened to every iteration of ARC's Reference preamplifiers, phono stages and amplifiers over the past ten years or so, and I have never been so immediately and positively impressed as I was with the upgrade from Reference 5 SE to Reference 6. Needless to say, this is my new reference.

Price: \$14,000.

Warranty: Three years parts and labor.

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Associated Equipment

Analog: Gpiral Groove SG1.2 turntable with Centroid tonearm, Lyra Atlas stereo and Titan i mono cartridges, Nordost Valhalla 2 tonearm cable, Audio Research Reference Phono 2 SE and Reference 3 phono stage.

Preamps: Audio Research Reference 5 SE.

Amplifier: Audio Research Reference 150 SE.

Digital: Neodio Origine CD player.

Speakers: Avalon Transcendent.

Cables: Nordost Valhalla 2 interconnects, speaker cables and power cords.

Power distribution: Quantum QB8 AC-distribution unit and Qx4 power purifier, Furutech GTX D-Rhodium power receptacle.

Supports: Stillpoints ESS Grid, Stillpoints Ultras and Ultra 5s.; Neodio Origine B1 supports.

Accessories: Record Doctor cleaning fluid and brush, VPI "magic bricks," Audio Physic cartridge demagnetizer, Shunyata Research Dark Field Elevators, Acoustical Systems SMARTractor, Dr. Feickert Analogue's Platterspeed app.