

Plymouth company finds niche in sound that's close to perfect



Audio Research founder and President William Johnson with a VS55 vacuum tube stereo power amplifier at the company's headquarters in Plymouth. The company, founded in 1970, manufactures high-end audio equipment, including vacuum tube amplifiers and preamps.

Meticulous attention to detail and a passion for great sound systems have placed Audio Research among the top manufacturers of high-end audio equipment in the world.

By [David Gustafson](#), Star Tribune

The listening room at Audio Research in Plymouth looks like it came off the Starship Enterprise. In the center are \$50,000 speakers hooked up to cables thicker than your forearms running into an 80-pound amplifier.

Sit in the sweet spot in the center chair and listen to Ani DiFranco, and you will hear her guitar pick pluck and scrape each string as the metal vibrates against wood and frets. You will hear how far she is from the microphone and hear the notes resonate in the hollow body of the instrument. It is like seeing sound in three dimensions.

Sound recordings contain massive amounts of this aural information. All of those intimate details, the pluck of the strings and the rattle of metal against wood, are there on your CDs and LPs. But the average stereo system loses a lot of that information as it translates the sound waves from the original recordings to your speakers. Drawing out (or preserving) all those sounds requires the sort of high-end equipment that specialty boutiques like Audio Research manufacture.

Since 1970, the company has been building amplifiers and preamplifiers for home audiophiles, the sort of people who have a turntable in their living room where others have a television, and who own enough LPs and CDs to stock a library.

"It's just like the automotive market. There are people who want a better kind of driving experience and they're willing to go to what seems to some of us exorbitant lengths to get that experience and pay the price, but they do it." said Terry Dorn, vice president of marketing and sales.

To manufacture the BMW of amplifiers, Audio Research has gone so far as to develop custom solder and wire coating, specially manufactured for its sonic properties, and "we evaluate lead length on resistors and capacitors. All those things have an effect on sound quality," Dorn said.

Sometimes the company will order, say, 1,000 transistors in bulk, then test each one. Of those 1,000, perhaps 100 will meet their standards. Perhaps only five will. The rest are stashed away and might never be used.

Because of this attention to detail, each stereo component can cost as much as a car -- from a few thousand dollars for a preamp to just under \$20,000 for a 600-watt power amplifier.

Ironically, the goal of the costliest audio equipment is to simply disappear, recreating a full and transparent "soundstage" that sounds like you are sitting in the studio or the club or the concert hall (and when it's done right, you *know* where you're sitting).

Professional listeners such as Warren Gehl have the key job at Audio Research, using their ears to pick up on details that diagnostic tools can miss.

"In the development of a product, we might listen to two or three prototypes and listen to literally hundreds of steps before we're satisfied that its across-the-board better than a predecessor product," he said.

Like many of the company's roughly 50 employees, Gehl is also an audiophile, with about 8,000 LPs and a couple of thousand CDs at home.

He joined Audio Research after working in research and development in aerospace engineering, a background that serves him well.

"Vibration dampening and mechanical integrity has a lot to do with the sound quality of the products," he said.

Audio Research maintains that it is one of the oldest continuously operating manufacturers of high-end audio equipment in the country. President William Johnson founded the company in the '70s as more music lovers began to invest in top-quality audio equipment.

Today, "It's a video world, it's an iPod world, but there's still a place for the products we manufacture," Dorn said. "There are many enthusiasts around the globe who really care very deeply about music and how it's played in their home. That's the customer we try to continually find."

Audio Research sells its products through international distributors and about 50 small specialty retailers -- such as Audio Perfection in Minneapolis -- the sort of dealers that can take the time to get to know a customer personally over a period of months before they commit to a purchase.

Some customers will even borrow a component to hear it in their home before they shell out thousands of dollars for what could be a lifelong purchase (Audio Research says it will repair any product it has ever manufactured).

"At the end of the day, I think we all feel here that we do products that we're really proud of, that somehow contribute something to civilization and cultural longevity," Dorn said. "It certainly helps keep interest in music alive."

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