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# sound application

## Reference LineStage powerline conditioner

as reviewed by Jeff Parks



Line conditioners. Who needs them? I used to think that if you had a clean, dedicated AC line and ground, a line conditioner would not be necessary, but as my audio system improved, I began to realize that I was wrong. I am now a believer. Why? It goes back to my experience in modifying sports cars, where it all starts with the gas. As the principle applies to audio systems, it all starts with the electricity feeding your gear. Using higher-octane gas in cars makes sense for racing, so why wouldn't cleaner power make sense for high-end audio systems?

#### LOUDSPEAKERS

Aerial 7Bs in Bird's Eye Maple, coupled to the floor using OEM (optional) Sound Anchor stands.

#### ELECTRONICS

Audio Research LS-25MKII preamplifier, PH-5 phono stage, & VT-100MKIII amplifier with OEM stock 6550 tubes.

#### SOURCES

VPI Aries II w/JMW 10.5 arm and Lyra Helikon MC cartridge, a Mark Levinson Model 37 (upgraded by ML), Dodson 218 DAC, and a Sansui TU-717 tuner (upgraded and DX'ed), Antenna Specialties Outdoor FM Antenna w/rotor.

#### CABLES

Cardas Golden Reference interconnects both XLR & RCA, Cardas Golden Reference bi-wire speaker cables, Acoustic Zen MC-2 Silver, Marigo Apparition 5.8 Signature, and Audio Magic Clairvoyant RCA S/PDIF digital cables. Audience powerChords power cords.

#### ACCESSORIES

Sound Application Reference LineStage lineconditioner, Wally Tools, a VPI SDS power regenerator for the Aries table, two Townshend Seismic Sink stands, a Townshend Seismic Sink for the Aries II, a Bedini Dual Beam Ultra Clarifier, Shun Mook Diamond Acoustic resonators under amplifier, a VPI 17F vacuum record cleaning machine, 9 Bright Star Big Rocks under all gear except for VPI Aries, Bright Star Little Rock 3 on top of Dodson 218, 9 Bright Star Little Rock 2s on top of all gear except for VPI Aries II and Audio Research VT-100MKIII, 3 Lovan Sovereign sand filled amplifier stands, 9 RPG Skyline diffusers (back wall), 32 RPG Melfoam diffusing/absorbing panels (front and side walls), 4 Echo Buster Corner Busters, a set of 3 Argent Room Lens diffusers/tuners, 3 Sound Application 15 amp duplex outlets, Auric illuminator CD cleaner, and one 15 amp dedicated line.

Several years ago, I read an article in the now-defunct audio rag, Ultimate Audio. The article discussed how to install the perfect (or should I say almost perfect—nothing is perfect in our hobby) dedicated AC line. The piece went into great detail about why it is important to install a dedicated line. At the end of the article there was a contact number for Jim Weil of Sound Application if you had further questions. Because I was considering the installation of a dedicated line (with the help of an electrician, I should say), I decided to give Jim a call. As soon as he picked up the phone, I realized that I was speaking to another highly enthusiastic—if not obsessed—audiophile. Enthusiasm is an understatement when describing Jim. I am a fairly hyper person, and a fast talker, but I met my match in Jim. Nobody on this planet can keep up with him—not even the Federal Express guy from commercials of years gone past! Once you are done speaking with Jim (aside from the need to have a smoke), you will realize that he has given you new insight into our hobby. Jim is the real deal.

Jim Weil started building audio gear about 37 years ago. He has become one of the most respected designers of line conditioners in the industry, perhaps because he follows the old-world path of earning your livelihood by honorable means, at any cost. If Jim cannot offer the best product he can create, he will not manufacture it. Jim's design philosophy is the opposite of that of most manufacturers, who design their products to price points. Jim does not. After all of the research and development is complete, Jim creates the best product he can—nothing less, regardless of cost. That must be why Jim's products, though pricey, are so popular among audio reviewers and recording studios.

What is in the Sound Application Reference LineStage that can justify a price tag of \$5000? For starters, you get a device that has been designed and redesigned many times over, as Jim finds ways to improve it. Jim has listened to thousands of different capacitors, along with dozens of resistors and hundreds of wires when designing the Sound Application Reference LineStage. Then you must understand that all Sound Application products are hand built by Jim, with no printed circuit boards or automated soldering. All terminations are done by true cold welding techniques, which means using 200 foot pounds of torque in a four-ton arbor press, where you can actually feel copper becoming plastic. Where cold welding is inappropriate, Jim solders in an Argon gas environment to eliminate the surface oxides of the copper and the solder, which creates the ultimate electrical joint.

Nothing is left to chance in designing the twenty-eight stage Reference LineStage lineconditioner where it uses the finest of audio components. All components are custom manufactured for Sound Application. This includes the following: An ultra high speed magnetic circuit breaker (SA has been using this type since 1992), hand tensioned, hand soldered, exotic film and foil capacitors specifically designed for the application as high frequency AC RF filter caps where these custom capacitors are of the highest quality available today. The outlets are special order Hubbell that are 300% more conductive than standard brass. The buss bars for the circuit module are constructed of mirror polished OFE type 101 copper. The solder used to both manufacture the capacitors and to assemble the capacitive filter array is the same proprietary SA solder. No dissimilar materials are used anywhere in the Reference LineStage. Last, critical resistors are rated .01% with an effective TCR of 2ppm and internal wiring is cold welded inductionless high speed data transfer wire. Why no gold, silver, or rhodium plating anywhere in the Sound Application Reference LineStage? It is because, according to Jim, they all add a type of coloration or electronic haze to that changes the original signal in one way or another, thus, degrading the sound. Talk about obsessive!

When I approached Jim about the possibility of reviewing the Reference LineStage, he suggested that he bring one over to my home for me to listen to before receiving the review sample. After measuring the noise coming in from my power line, Jim declared that my AC was pretty clean considering where I live (in the 'burbs of southwest Riverside County in Southern California). When we pulled out my old line conditioner and replaced it with the Sound Application Reference LineStage, there was an immediate difference in the musical presentation, and it was NOT subtle. We were listening to a completely different system. There were dramatic improvements in both micro and macro-dynamics, to the point where I felt that my amplifier now had reserve power. Imaging improved, with pinpoint accuracy and no smearing. Instruments took on lives of their own. An artificial brightness—a metallic tinge in the

upper frequencies—was gone. I had always blamed this on my cables or my Audio Research amplifier, which can be a bit forward, but my system now had a natural ease that it had never had.

Unfortunately, my time with Jim that day was short. I thought I was to receive the LineStage during this visit. My mistake. I later learned that Jim was "interviewing" my system. He wanted to be certain that it was of reference quality. IN the past, he had heard several reviewer systems that were not of sufficient quality. Again, talk about obsessive! Jim told me I was to receive my sample unit in about a month, and I couldn't stand the wait. I had tasted the apple, and had to find a replacement for what was obviously an ineffective line conditioner. After a short search, I found an older Sound Application model, the CF-4, which made a noticeable improvement in my system, but not as much improvement as the LineStage. With the CF-4 in my system, I heard more dynamic power, less compression, a wider and deeper soundstage, and better focus. Until then I had not heard a line conditioner that did not limit the dynamics of my power-hungry ARC VT-100MKIII. In addition, my system had a natural ease that it had never demonstrated in the past. Essentially, my rig sounded less like an audio system and more like music.

Jim was not able to deliver a review sample of the Reference LineStage in April 2005, so it turned out to be a good idea to buy the CF-4. I even thought that I might be happy with the CF-4 instead of the much more expensive Reference LineStage, but I soon found out that that was wishful thinking! As soon as I replaced the CF-4 with the Reference LineStage, all of the things I said about my previous line conditioner now applied to the CF-4, though not to the same degree. The system now sounded more relaxed, and it had better dynamic swing. Highs were more extended without sounding bright or etched. The background also sounded quieter. In fact, it was dead quiet! This resulted in a larger, more realistic presentation and a deeper, wider soundstage that moved the system closer to the sound of a live performance.

What was I to do? Buy the unit? \$5000 is a lot of money for a line conditioner. I was also wondering whether the whole experience was system dependent, so I decided, like Jim, to take the Reference LineStage on the road, and to try it in the systems of audiophiles that that I knew and respected. Knowing the strong opinions of these audiophiles, I reasoned that if there were any weaknesses in Jim's design, they would bring it to my attention. Across the board, the effects of the LineStage were the same —better dynamics, more detail, a larger and more lifelike soundstage, and a quieter background. All of this occurred whether we were listening to a tube- or a solid-state-based system. Bass improved without ever sounding bloated or boomy. The only complaints were about the cost of the LineStage, but as Jim says, "It's all about the music!"

The Sound Application Reference LineStage has been the biggest audio upgrade that I have heard in my system to date. Nothing, and I mean nothing—no speakers, no amplifiers, no preamplifiers, no CD players, no turntables, no cartridges—have made as much difference in my system as the Reference LineStage. I am now hearing my Audio Research gear for the first time, and I understand why so many high-end audio manufacturers, audio reviewers, and recording studios, including MoFi and Rick Rubin's American Recording, use Jim Weil's products. They are simply THE BEST. Knowing this in hindsight, if I ever put together another audio or home theater system, I will start with the line conditioner before purchasing any other gear, and that line conditioner will be the Sound Application Reference LineStage. The difference that this product made in my system was unbelievable, so I purchased the review sample. That is the highest recommendation I can make. **Jeff Parks**

#### **Reference LineStage**

Retail: \$5000

#### **Sound Application**

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