

JPS Labs Power AC In-Wall Cable

by Rick Becker @ EnjoytheMusic.com



Where I'm Coming From

To paraphrase Richard Nixon, I am *not* a cable guy! Well, at least I am not an *expensive* cable guy. I learned early on in my adventures in high-end audio that cables DO make a difference. I worked my way up from Radio Shack 18 gauge hook-up wire to Mogami Star-Quad interconnects to Canare GS-6 Guitar amplifier cable to a couple of side-steps with Belden coax cable before I found the ultimate Poor Boy's Delight in military spec cable for mere pennies per foot. I've sat there on the riverbank, like Bob Dylan, "Watching the River Flow" as cable companies sprang up, charging ever-higher prices for their various interpretations of sonic heaven.

After a few years of listening to experts talk about the sonic advantages of having a dedicated line for the system, I had a friend install a 20-amp line in my townhouse. I reasoned that moving anyplace else was probably years away, so I might as well try it out. At that point my system was still pretty modest--a slightly modified Counterpoint SA-100 amp and Near 50ML speakers. While the benefits more than justified the effort and cost, they were not earth shattering, as I recall.

Years went by, the system grew, a wonderful woman came into my life, and with a \$68,000 upgrade came a larger dedicated listening room, a new kitchen, and a new address. I found myself needing a new dedicated line. This is where JPS Labs comes into the picture. And Joe Skubinski.

If Joe had ever known that I was a home-brew cable kind of guy, he probably never would have let me review his Power AC In-Wall cable... lets just call it the In-Wall to streamline the conversation.

At \$18/foot, I was stepping way out of my league, but in the High End arena, this cable is the only game in town. As far and wide as I've read, this is the only cable claiming sonic benefit that is designed to go from your breaker box to your wall outlet without breaking code. Everything else is just Romex, or the equivalent, a few very expensive balanced line schemes excepted.

With 45 feet between my box and the wall, we are talking about a significant chunk of change. And was I skeptical? You bet!! We're all familiar with the arguments -- "You would have to run a line clear back to Niagara Falls..." in one direction, and "yeah, but the signal has to pass through this tiny little wire inside the amp..." in the other direction. Yes, I was skeptical, but I am also a "Show Me" kind of guy with philosophical roots in the British Empiricists: Locke, Berkeley and Hume. I've also learned to trust my ears, and accept their limitations.

Installation

Joe sent me the cable pre-wired with the \$100 four-outlet box that normally comes on the JPS Power AC+ Outlet Center (a 2 meter, 8 gauge non-filtered extension cord that sells for \$550). Having the outlet box at the audio system end required me to feed the cable into the basement through a hole I drilled in the floor. Once in the basement, I ran the In-Wall along the floor joists using cable ties, and through the joists where I did the drilling myself, at a lot less than the \$42/hour the electrician charges. I was careful to stay away from florescent lights and only crossed other ac lines at right angles, staying as many inches away from them as possible. Obviously, I have an open ceiling in the basement.

I hired an electrician to do the final hook-up, since close inspection revealed that what I thought were blank slots in the Square D breaker box were really doublewide 30-amp breakers for the dryer and air conditioner. Consequently, several house circuits had to be piggy-backed on twin breakers to create space for a 30-amp breaker for the In-wall and another 20-amp breaker for a dedicated line of 12 gauge Romex I ran to the family room for use with my modest video rig. I also took this opportunity to have all the ground connections tightened down inside the box, since these tend to loosen up over time. (My new home is about 15 years old). Then we removed the ground wire at the water pipe and sanded the copper water pipe down to shiny metal with a strip of emery cloth. Which reminds me...I also have to do this to the jumper around the water meter.

The Cable

The In-Wall is an unshielded cable with two 10 gauge wires for the mains and a 12-gauge wire for the ground. The wires are composed of relatively fine strands of a JPS proprietary alloy spun in their trademark Optimized Field Matrix. The strands themselves looked silvery with traces of copper shining through, but it was not silver plated copper, according to Joe. He was pretty mum about actual content, as one should expect, but he uses the term "Alumiloy" for some of his other cables, which might be a hint. He did say that even though this is an unshielded cable, the design

rejects about 35 to 40db of noise. The Optimized Field Matrix also claims to minimize inductance and capacitance, though no specs are given, and I'm certainly not capable of measuring these properties.

To complete the package, fibrous filler is used and the three wires are twisted and housed in a bright red synthetic casing about a half-inch in diameter. There is no mistaking which cable emanating from my breaker box is for the audio system. Serious bragging rights here, if you're so inclined. The cable is as flexible as JPS claims, and was easy to string through the joists--much easier than the solid core Romex used on the home theater line. The 10 gauge wire allows for a 30-amp breaker and is the largest diameter wire that will fit in hospital grade, industrial grade or other high-end duplex outlets such as the well-known Wattagate or JPS's own duplex outlet. In the Outlet Center that Joe hard wired for me, the In-Wall was soldered onto a circular copper distributor that feeds all four outlets simultaneously. This Outlet Center also has two externally accessible screws for permanently attaching it to a baseboard, or into the floor, as is normally required by code. Anchoring the Outlet Center in this manner would also facilitate removal of plugs. While these are not listed as hospital grade outlets, they are certainly as tight as spec grade outlets and possibly industrial grade as well.

So How Does It Perform?

Linda cooked up a great scallop and vegetable shish kabob on the grille while I hooked up the system. After dinner and two glasses of a very nice white wine, I powered up the system and dropped in Joe Cocker's Greatest Hits CD (A&M Records, CD 3257).

"I get by with a little help from my friends"

--yeah, really! I've had to thank a lot of people in my life.

Wow! But a very mixed "wow". The volume seemed lower for the setting I had selected. The soundstage was larger. Joe Cocker, the back-up singers and the instruments were nailed down in space, but were still somewhat fuzzy. And the Plinius was not yet warmed up in class A mode. It took me the next four songs to locate my notebook in a whole-house search, and in just those 12-15 minutes the music got noticeably better. The pace of the music had picked up and the music was propelled along.

"Ain't it high time we went?!"

The volume at the listening chair measured in the 82-88db range. It was early August and the fan in the family room, as well as the air conditioner, was combating the late evening heat. Not the lowest imaginable noise floor.

"My baby wrote me a letter"

--Had my feet tapping hard on the footrest of the recliner.

Next I turned to Lyle Lovett's "Joshua Judges Ruth" (MCAD-10475) and keyed in "Church" to find an improved depth of field with the back-up singers standing out in my front yard. On "She's Already Made Up Her Mind" the bass notes came through deeper and tighter, which was surprising on two counts, since I thought the VR-4 loudspeakers were already pretty deep, and the bass has a reputation for being pretty loose. On "North Dakota" Rickie Lee Jones' voice was more clearly differentiated from Lyle's, and more defined.

The next morning after the new line had been cooking all night, I popped in James Taylor's "Live" and was thrilled to discover more hall ambience, articulate crowd applause and crowd laughter and a deeper, more pinpointed soundstage. And much to my surprise when I got ready to go to work, all of this overnight improvement was perceived in class AB--I had neglected to drop the Plinius into class A!

After work, that Saturday evening, I listened to Bruce Springsteen's "Human Touch" in class A. It never sounded better. The Phil Spector-like wall of sound could be seen brick by brick. On "57 Channels" the repetitive bass line was tighter and more tuneful, and the distant repeat of "57 Channels and there's nothin' on" in the far back left corner was pinpointed and clear. I had eased the volume up into the 87-90db range by this time.

I replayed Joe Cocker, Lyle Lovett, and James Taylor, edging the peaks up to 96db at the listening chair. Now, 24 hours later, the sound was smoother, more controlled, especially noticeable in the bass and treble and the bass had real slam, all of this in class A, of course.

About 10:30 pm I decided to switch over to the JPS 30 amp In-Wall line.

Say What?

Oh, didn't I mention that I started out on a 20 amp dedicated Romex line that I had installed as a control for this review? Yeah, all those improvements were achieved on the cheap stuff, wired into an outdoor-type electrical box with two industrial grade duplex outlets. Basically, this was the same type of dedicated line I had in the old townhouse. The major difference was the new room. However, unlike the townhouse, the speakers in the new room were placed in front of the long wall with the sidewalls being 15 feet to the right of the right speaker and 10 feet to the left of the left speaker. The vaulted ceiling was about the same: low at the front wall behind the speakers, and high at the wall behind the listening chair. The volume of the new room is about 2.5 times the volume of the room in the townhouse. What a difference a room makes! So all of the above comments establish a baseline for what an ordinary dedicated line can do in my listening room.

On the In-Wall, James Taylor's "Traffic Jam" on the *Live* CD instantly sounded better in a subtle way. I'd call it "effortlessness", as if the cable had already been broken in. The attack on the cymbals seemed faster, with more energy at the top end. In the closing crescendo of that song the individual instruments remained clear and defined.

Switching to Lyle Lovett, "Church" seems to have more "life" but I can not pinpoint

specific improvement. On "She's Already Made Up Her Mind" I heard the best bass control my system has ever given me. The deepest notes actually had timbre now! We were starting to cook at last, so I switched to *Joe Cocker's Greatest Hits* CD, "With a Little Help From My Friends", where the chorus women sounded more three dimensional. On "Woman to Woman" the difficult falsetto passages were more discernable--not reaching full cognition, but close to it. On "High Time We Went" things seemed more three dimensional, and the guitars were sweeter. And now more than a hour after switching to the In-Wall, on "The Letter", I heard wonderful hall cues in this live performance. Compared to the hit version by the Box Tops, Joe Cocker blows the cereal right out of the bowl.

Perhaps what amazed me most was that I was doing this listening at a level that regularly hit 96dB peaks -- a full 8dB louder than I normally listen--yet I was more fully enjoying it. This might not be good news for the neighbors. Oh well, it was only midnight.

I resumed with Joe Cocker the next morning and the opening string section of "I Think It's Going to Rain Today" was actually bearable, unlike the previous night. At the end of "Cry Me a River" the piano sounded like notes coming out of the inside of a piano, rather than a distant impression of a piano being played on stage. Joe's passionate "You Are So Beautiful", to which we danced at our wedding, gave me goose bumps.

Overall, this Sunday morning, things were sounding much better. Then, as I shut down the system to leave for the Park Avenue Arts Festival, I realized that I had forgotten to switch into "Class A" again. I had been in AB all morning. I could hardly wait for "Hearts of Space" on NPR later that evening.

Program 635, "Return to Dreamtime", featured electronically processed didgeridoo music from the Australian Outback. With the weather hot, I left the amp in class AB and reveled in the deep bass as it rippled through the room. It seemed that the warm fuzzy bass of my VR4s had finally been tamed.

Monday night, after the In-Wall had been feeding current for almost two days, on Bruce Springsteen's "Human Touch", "57 Channels" threw a huge soundstage with very distinct and pinpointed percussion. On the title song, the tambourine actually sounded like one, rather than a bag of nails being shaken. The improvement was of the magnitude of a major component upgrade--like when I went from the EAR to the CAT preamp, or from my old Counterpoint SA-100 to the Plinius SA-100.

In the mood for some serious listening, I reached for my Burmester CD II and punched up "Live In America" by Paco de Lucia. This live recording of Flamenco dancing with guitar clearly revealed the audience voices in the background and the hall cues, not to neglect the precise tapping of feet and wonderful classical guitar. The first time through I listened to it louder than life with a range of about 80-96db. When I lowered the volume to a more life-like 65-90dB it sounded just as great and the audience voices were just as perceptible.

Cranking it back up to 85-95dB for "Back on the Block" by Quincy Jones, the chorus was much more easily understood. The bass was terrific and even at the

normally congested part at the end, voices and instruments were distinct. Only the finale of the Vaclav Nelhybel orchestral piece on the Burmester CD II, hovering at 98dB, taxed the Plinius with its deep bass. At 11:10 pm Linda interrupted me to tell me that the system sounded much better, and that her mother wanted to talk to me about our Labor Day weekend plans. What an organizer she is!

Back on the Burmester CD II, Stevie Ray Vaughan's *Tin Pan Alley* came across with greater three dimensionality and palpability than ever. The soundstage extended 10 feet to the side of each speaker in parts of this song. And while the attack was not as sharp as on some Piega loudspeakers I've heard, the decay was longer. Smooth and easy, I could live with these speakers for the rest of my life.

On Tuesday I played the first five cuts of Melissa Etheridge's "Brave and Crazy" at my normal 74 to 86dB level to minimize the difference in amperage between the 30 amp In-Wall and the 20 amp Romex lines. When I switched over to the Romex and replayed "You Can Sleep While I Drive", a gentle ballad, the difference was clear. The Romex gave a dryer rendition of the song, the image was flatter, and the soundstage was slightly smaller. The Romex was more like a solid-state system, slightly more focused. The In-Wall was more like a great tube system--more liquid, more seductively lit, and more three-dimensional.

On Wednesday I ran the comparison again, this time with Boston's self-titled LP. The results were similar. The In-Wall had lots of bloom. The Romex had a little more focus, but the soundstage was flatter and more recessed. But, interestingly, I noticed more toe tapping with the Romex. Switching back to the In-wall, the huge soundstage was readily apparent. The sound was fuller and there was more awe of the music--it was simply more colorful. It also made me certain that I would appreciate a more refined cartridge.

Don't make a big thing about the difference in focus between the Romex and In-wall dedicated lines just yet. I also had on hand for review a pair of Coincident Technology Partial Eclipse Mk II loudspeakers, which I put into the system for comparison of the lines. Moving from the In-Wall to the Romex, the Coincident loudspeakers seemed to lose some focus and some dynamics. Bringing the system back into the In-Wall line I definitely noticed better focus and pinpointing of musicians in the soundstage. The decay of the cymbals was definitely more refined, too. The advantage of the 30 amps was especially evident on James Taylor's "Steamroller Blues" from his "Live" CD. Nevertheless, fine-tuning the focus to your particular taste is relatively easy to accomplish with a variety of "accessories" that I have in for review. Stay tuned.

Other Considerations

The fact that I could comfortably listen to music at a higher than normal level, as well as perceive more inner detail, indicates that there has been a significant lowering of the noise floor. When something like low-level noise disappears, it is hard to describe. Many people talk of a "blacker background". When you do a lot of listening in the dark, as I do, that term is kind of useless. I'm more comfortable saying that the In-Wall improved my ability to hear the music in greater detail and

nuance. And this, in turn, led to better appreciation and an enhanced emotional response to the music.

This kind of talk is frequently used in reference to power line conditioners, so it is natural to ask the question, "Do I still need one?" The In-Wall does relatively nothing to inhibit the flow of current. A power conditioner has the potential for inhibiting current, depending on its design. Also, some component manufacturers suggest that you are better off not using one for optimum performance. My experience with conditioners is pretty limited, but this is certainly a direction that merits further investigation. I hope I can follow through with an answer in the future.

By using the In-Wall (or Romex) without the surge protection many conditioners offer, you have to assess your vulnerability to such dangers. Both my former townhouse and my new home are in relatively new developments with buried cables. The local transformer station is about a quarter mile away and is also relatively new. My single story home lies in a low area and I have large trees that are more likely to be struck by lightning than my home. I also get up in the middle of the night and disconnect my equipment when a thunderstorm threatens. And I disconnect the system when I know I'm not going to be around for a week. Linda is a knowledgeable back up in this regard. You will have to assess your own situation and adjust for your own peace of mind.

The issue of value comes to mind for many people in High End audio. With the economic storm clouds still hovering, and the number of millionaires in this country on the decline, many people are re-examining their priorities and values. Should you sink \$X,XXX into your system for an In-Wall line?

Well, the dollar amount depends on the distance from your breaker box to your system. If the cable is buried "in walls", it will have to stay with the home if you ever move, and would likely have little value to the next homeowner. If it can be run through the floor joists that are easily accessible from a crawl space or basement, such as many homes in the Northeast, it would be fairly easy to remove it and take it with you. Just be sure to remove it (or replace it with Romex) before you put your home on the market. Of course, if the family homestead is likely to be your home for the rest of your life, or most of it, then that can make the decision a little easier.

Summary

If your system is toward the lower end of the high end, or you're likely to move within the next few years, and the installation is relatively easy, I'd probably recommend just going with a Romex dedicated line. For a hundred dollars, and an evening playing with an electric drill, a dedicated line is a true bargain.

On the other hand, if you've got some nice mid-to-top quality components, and if your life is pretty stable, and if the installation is not too complex, the \$1000 to \$1500 upgrade to the In-Wall is highly recommended. That's a lot of "ifs", but you could easily spend a lot more upgrading a single component. With the installation of the In-Wall you can improve your entire system, getting the best from every

component--now, and when you upgrade them in the future. It is not a "jaw-dropping" improvement, but one that audiophiles with educated ears will easily appreciate. The path to the highest levels of music reproduction is not simple, and rarely inexpensive. The JPS Labs Power AC In-Wall cable definitely took me higher up the mountain and gave me a better view. And for the high rollers out there, building new homes with built-in home theaters and dedicated music rooms, this wire should be considered standard equipment. Don't think twice.

Check/Double Check

Many of my comments and impressions were taken from the first few days of listening, as this period of the review is when the differences are most obvious. As of this writing I've had the wire in the system for over a month. To reconfirm my perceptions I selected Lyle Lovett's "Church" and "She's Already Made Up Her Mind" and played them through my system with the Coincident Technology speakers powered with the following sources, in the following sequence:

In-Wall dedicated line
Romex dedicated line
In-Wall dedicated line
Romex dedicated line
15-amp house circuit with Tripplite power conditioner
15-amp house circuit with metal power strip
In-Wall dedicated line

My findings stand firm.

At the very least, we all owe a tip of the hat to Joe Skubinski at JPS Labs for taking the effort to develop this wire, and making the financial commitment to bring it to the marketplace. This wire opens up a whole new category of cable and is a very significant contribution to the enjoyment of recorded music. Hopefully it will find homes on both the recording and playback sides of the fence.

The System

Linn LP-12 turntable with MMT arm and Audio Technica 160-ML cartridge
Sony CDP-X77ES player as transport, Illuminati D-60 cable, Muse model two DAC
Sony ST S550ES tuner with Fanfare FM-2G antenna
Convergent Audio Technology SL-1 Signature Mk III preamplifier
Plinius SA-100 Mk III power amplifier
Von Schweikert VR-4 loudspeakers
Coincident Technology Partial Eclipse Mk II loudspeakers
Symposium Acoustic Svelte and Isis platforms, Rollerblock Jr.s
Interconnects: 18 gauge military spec wire with Apature locking RCA's Speaker
cable: military spec wire, various gauges, depending on speaker

Ratings

NA means not applicable. I assume that the improvements in the various frequency ranges were probably uniformly excellent, and that any variations I heard from one range to another were simply a reflection of the speaker in use.

Tonality	95
Sub-bass (10 Hz - 60 Hz)	95
Mid-bass (80 Hz - 200 Hz)	95
Midrange (200 Hz - 3,000 Hz)	95
High-frequencies (3,000 Hz on up)	95
Attack	95
Decay	95
Inner Resolution	95
Soundscape width front	95
Soundscape width rear	90
Soundscape depth behind speakers	95
Soundscape extension into the room	NA
Imaging	95
Fit and Finish	70
Self Noise	NA
Value for the Money	85

Manufacturer's Reply

Dear Editor,

We would like to thank Mr. Becker for his kind review of our Power AC In-wall cable. His time and insight are much appreciated. To expand on his personal findings, I would like to add a few of our own findings and comments concerning AC power.

We have found just as Mr. Becker had in his parallel review of the fine Coincident loudspeakers how the more resolving the speaker, and system, the greater the contrast very good AC cabling offers. We have found this to be the case over the years within our and our dealers' listening rooms, as well as at the many trade shows where JPS Labs cables have been utilized. When high quality cabling is used throughout, a decent system will provide greater long-term enjoyment, and system

problems and the need for future upgrades are reduced.

Our R&D on this new product took many years (longer than some companies have been in business) simply because we wanted to make sure the finished product's overall effect was very positive in any installation, with any voltage and current demands, and in any environment, without 'tayloring' the sound in any way. Our time and money spent in development already has its rewards in many systems throughout the world, and as Mr. Becker noted brings about a whole new category for high-end cable, something which we at JPS take great pride in accomplishing many times over.

Our findings also indicate that the need for a typical line conditioner at the outlet is reduced or eliminated due to the great ability of the JPS cable to convey clean instantaneous power from the source to the equipment without the addition of noise or loss over its length. Only in areas of extreme power problems from the grid or environment may added filtering be beneficial, and in many of these cases it should be used sparingly and on as few components as possible. For example almost all amplifier manufacturers will agree that their products will perform optimally if plugged directly into the wall outlet, avoiding any additional paths power must take to arrive at the amp.

Mr. Becker had brought up a good point about spike protection, and while we have found the odds of equipment being damaged by spikes is minimal (like winning the lottery would be easier, except for regions with known lightning problems), the simple addition of a spike protection device such as a MOV cube plugged into the end of a dedicated line helps protect everything afterward. So if a number of outlets are available just plug one of these \$10 spike protectors into one of them, specifically the one closest to the breaker panel or source, and all outlets on that one circuit are protected. The best form of protection though starts at the source, and today for about \$200 or a monthly fee you can have your electrical utility company install a serious dedicated surge arrestor directly behind your watt-hour meter which offers much greater protection as it acts on the surge or spike before it even enters your home.

The reduction of noise combined with providing the best possible interface from the source of power to each component is imperative to any system performing to its best ability. The results of black backgrounds, lack of grain, hum, hiss, and noise, greatly improved audio and video clarity and bandwidth, reduced component interactions, and more, all contribute to the fact that the JPS Power AC In-wall cable is a requirement for any good system.

Many thanks again to Mr. Becker for his time and efforts and to Enjoy the Music for publishing his and our opinions.

Take care...

Joe Skubinski

President- JPS Labs

Specifications

Size: 10 AWG, UL/CSA listed for in-wall use

Design: Optimized Field Matrix (OFM) construction

Price: \$18 per foot

Company Information

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