



Bybee Technologies Quantum Signal Enhancer \$119 each

Review by
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Enhancer or Coaster?

Flipping through Music Direct's 2015 catalog (the one with the cover photo of the "Boss") and the latest TAS Buyer's Guide, I was amazed at the plethora of tweaks and accessories that are supposed to elevate the performance of a high end audio system. Many of them we can intuitively relate to as credible products, while others seem to fall into the categories of snake oil or fairy dust. Getting past the hype and deciding which may be worthwhile additions can be a tricky proposition. Fortunately, money back guaranty offers often attend their purchase, yet even so, if we actually hear a difference in the short term, the long term assessment may not be quite as sanguine.

Bybee Technologies, Inc. is a well-established firm offering "signal purifying" devices that look a lot like resistors (Bybee also offers "plug-in" devices at the speaker end). Some of these are available to the consumer while others are strictly OEM products. Based on owner/operator Jack Bybee's research into quantum physics, the stated goal of these devices is the reduction of "quantum noise" in order to achieve sonic benefits. Bybee's products have received positive press, including the Bybee "bullet", about which Mike Peshkin waxed rhapsodic in these pages.

It may be worth noting that Jack is not just some joker who plays around with electronic gear in his garage. No, Jack is a quantum physicist. Quantum physics is the study of the behavior of matter and energy at the molecular, atomic, nuclear, and even smaller microscopic levels. Calling him a rocket scientist would be an insult. Jack is no quack, Jack.

At \$119.99 each, the QSE is one of Bybee's least expensive products. The QSE is the latest entry in the Bybee line-up, though it is different from its stable mates in form and function. Looking like an elongated beer coaster or credit card, the QSE consists of a 4"x6"x 1/4" piece of felt backed acrylic with specially engineered crystals suspended in epoxy. It is completely passive in operation, requiring no battery or power source. Unlike its companions, the QSE is not inserted into the signal path, but is designed to work when placed on (or under) a wire or component. It is completely passive in that it has no batteries nor does it plug in the wall. Therein lies the rub as far as one's acceptance of the QSE as a credible product. We all know the natural laws of audio dictate that a device inserted into the signal path will a priori make an audible difference. The QSE, by appearance and design, is another matter completely. Accepting that it can work amounts to a quantum leap of faith (sorry).

In broad terms, the QSE has been designed to enhance the flow of electrons for sonic benefits. The technical explanation is not so simple. The QSE contains crystals that are energized by a surrounding energy field (from a wire or component). Once energized, the QSE resonates at the same frequency as the C13 atom. As a result, this creates a magnetic field effect. In this magnetic field, the polarity of all electrons and protons are altered, affecting their oscillation by making them more aligned with each other. This reaction creates an effect that makes the transfer or sharing of electrons between atoms more streamline and efficient, which results in less "noise" in the current/signal path. Also, air molecules are less excited, making them less resistant to the sound waves. The QSE is the result of extensive R &D inspired by Magnetic Resonance Imaging (MRI) equipment used in the medical field. MRI equipment use large amounts of electricity to create a magnetic field to excite atoms in the body. The QSE, on the other hand, is effective by using just small amounts of energy to create the magnetic field effect. The sonic benefits are said to be greater transparency, a larger and more vivid soundstage, and a midrange that is "more liquid and less electronic".

My limited knowledge of physics dates back to a high school class that coincided with the release of the Beatles' Abbey Road album (guess which held my attention?) Bybee's explanation is way over my head and I opted out of a crash course on quantum physics. However, it reminded me that there are others who have jumped on the quantum bandwagon and explored the use of magnetic fields to manipulate the flow of electrons in different ways (Hi-Fidelity Cables with its Magnetic Conduction, for example). It also made me wonder if, having been designed to achieve a "sound" based on "unassisted" electron flow, current high end products would sound different but not in a positive way once magnetic manipulation is applied. I suspect we will be seeing more work in this area so stay tuned.

Bybee suggests that the QSE works on audio and video components, cables and power conditioners. Following suit, I placed the QSE on one component at a time, and listened with the QSE off, on, repeat (what a chore!). Eventually, I alternated between all six review samples on/all off for extended periods (ah, that's better). I started with solo piano and guitar recordings. If the QSE made a difference, I thought, it would be readily heard on uncluttered recordings. From there I worked my way up to folk and combo jazz and finally to rock and large scale classical.

And now for the \$119.99 question: did the QSE whip all of those rogue electrons into submission in the service of music? I don't know what is going on here, but after living with the QSE for over three months it was clear that the QSE was having an overall positive effect on the sound of my system. Don't get me wrong: the QSE is not going to transform your old Dynaco amp into a Constellation Hercules. But what it does to improve the sound of your system will put a smile on your face.

QUANTUM EFFECTS

The sonic improvements I heard were the result of the cumulative effect using all six review samples. Used individually, the QSE's contribution was subtle and not to the point that I could reliably report a significant difference. It was only after extended listening with the QSE six pack in place that I was able to make the following observations (six packs of the fermented sort were banished during my evaluation). I found that placement on cables and power cords near the downstream point of entry, and also on the power conditioner, had the most impact, but experimentation is definitely in order. If you don't hear a difference at first, don't hastily relegate them to coaster status. Be patient and let them work their magic.

What you will hear if you are patient is sound that is grain and noise free with enhanced transparency. A wide open and seamless sound filled the space between my Wilson MAX II speakers as never before. Not only that, musical forces became incrementally more tactile and immediate. Joni Mitchell's vocals on her seminal Blue album took (all referenced music is via LPs) on a more tangible, three dimensional quality, as did Stephen Still's distinctive guitar. Mitchell's vocals were brought into greater relief and the QSE made it obvious that she overdubbed her own background vocals on "Cary", whereas before her vocals were slightly indistinct and homogenized. I heard the same immediacy playing Nick Drake's Pink Moon, Norah Jones' "Come Away with Me", and the Weavers Reunion at Carnegie Hall, to name just a few. To be clear, by immediacy, I mean a sense of abiding presence coupled with a slight projection of images.

Listening to some Blue Note reissues, in particular the title cut to Eric Dolphy's "Out to Lunch", the QSE's overall enhancement of clarity brought me closer to the source. Dolphy's bass clarinet, for example, took on greater bloom and dimensionality, the QSE working symbiotically with the ARC gear to produce what Jonathan Valin of TAS calls "action", that is, the sensation that the sound is moving

forward as it gets louder. The QSE again evinced an "in the room" perspective that enabled me to better appreciate the interplay of the

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musicians in this brilliantly quirky outing by Dolphy. Shifting to an equally brilliant if slightly more conventional jazz tour de force, Brubeck's Take Five (45 r.p.m.) filled the space between the speakers with palpably believable sounds. I was particularly taken with Morello's 5/4 drum solo, noting that his kit had magically snapped into three dimensional focus. The perspective created by the QSE was not of the cheesy eye-popping type you sometimes get from 3d TV. Rather, the QSE sounded wholly natural and unforced as you are drawn nearer to the performers.

Concomitant with the QSE's mild "zoom lens" effect was a modest increase in resolution. I have heard gear that project vocals and foreground instruments, making them sound closer up, yet without a corresponding increase in the resolution of fine detail that makes recordings more believable. In other words, the gear was generating an effect, frequency related, that was not in the recording itself. With the QSE you get the resolution with the immediacy, lending the belief that the QSE is not playing aural games but telling the greater truth.

To hear what I am saying, listen no further than to the dimensional vocal and guitar, the minute buzzes, creaks, and the back and forth movement, as Nick Drake plays and sings "in From the Morning" (Pink Moon). I had the eerie sense that I was inching closer to the sound of the master tape of this incredible recording. Playing Wilson Audio's 20th Century Masterpieces (LP), the resulting gains in transparency and resolution laid bare the contours and positioning of the cello and piano, contributing to the sensation that the performance is taking place in your listening room. For those interested in the absolute sound occurring in an acoustic space, this is a fabulous recording not to be missed (alas, the LP is long out of print - a hi-rez download is coming soon). And wait until you hear how the QSE brings out more of the breathy spittle and delicious tone of Coltrane's and Cannonball's saxophones in Kind of Blue!

I was never a big fan of prog/art rock (think Yes, Genesis, Gentle Giant, Emerson Lake and Palmer). Although the QSE didn't necessarily change my mind, it had the salubrious effect of

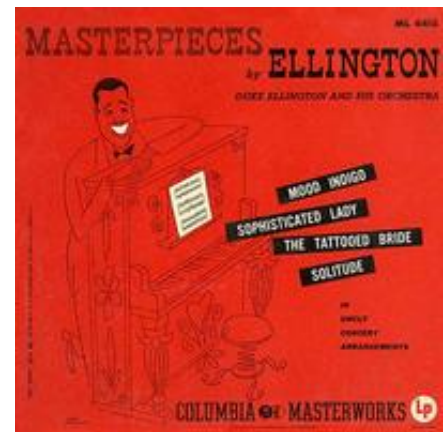


making the sometimes dense scoring of this genre more intelligible and consequently more enjoyable. It didn't have to change my view of Ambrosia's eponymous LP from 1974. Mixed by Alan Parsons, this lost masterpiece and flat out sonic tour de force features catchy pop melodies blended with dense, almost symphonic scoring. Replete with lyrics by Kurt Vonnegut, Jr., a recitation of Jabberwocky from Alice in Wonderland, a stunning array of instruments including 300 year old Javanese gongs and a massive pipe organ, all anchored by virtuosic musicianship throughout, this multi-track wonder is deserving of an all-out audiophile reissue on HQ vinyl and hi-rez download. With the QSE in place, Ambrosia never sounded better. The dense and demanding passages (and they are many) were heard with a

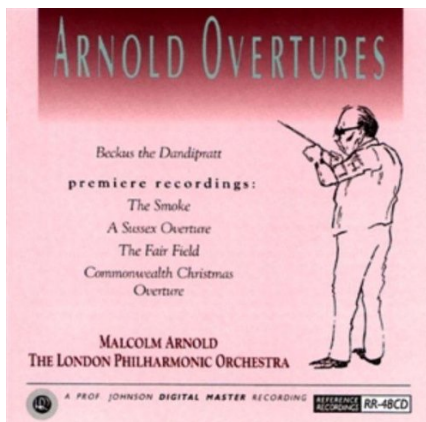
greater sense of flow and articulation. Layers of instruments were more clearly defined with each occupying a discrete place in the mix. It seems that getting all of those pesky electrons to march in lock step was paying off after all.

One of the touted benefits of the QSE is a midrange that sounds "more liquid and less electronic". I found this to be true playing natural sounding recordings, say, for example, the recent reissue of Duke Ellington's Masterpieces (LP), a stunner of a recording that features standards from Duke's orchestra recorded in full concert length for the first time. You simply won't believe this set was recorded in 1950 at a time when analog tape recording was in its infancy (it sets the bar for any self-respecting recording or mastering engineer). Mid-range magic abounds: breathy saxophones; sonorous and burnished brass; taut, woody bass; Duke's piano sounding real. My only complaint is the distantly mixed drums (OK, I am drummer, so take that criticism with a grain of salt). This is one liquid sounding recording to begin with, so I doubted the QSE could make it more so. I was surprised when the QSE six pack brought out even more textural and coloristic information in the saxophones, enabling me to better distinguish between alto and tenor. If the achingly beautiful sax solo in "Solitude" doesn't tear at your heartstrings, try the QSE and be prepared to melt into a puddle of audiophile ecstasy!

It was not just in the midrange that the QSE reduced an almost subliminal “electronic flavoring” to the sound. High frequencies took on a mellifluous and delicate character without sounding soft or rolled off. Sydney Harth’s violin in Reiner’s Scheherazade, always a treat for the ears, was even more refined, his upper register sustain at the conclusion sounding smooth as silk. The QSE more accurately portrayed the overtone structure of ride cymbals, always a difficult thing to get right. This was noticeable with a host of jazz recordings that hit the platter- Brubeck’s Take Five, Caravan (Art Blakey and the Jazz Messengers), Jazz at the Pawnshop, and others.



In fact the QSE’s impact on tonal purity across the board was impressive. All manner of acoustic instruments sounded more natural, the way I hear them when performing as a percussionist in a Town Band. A trumpet, in particular, is reproduced with its complex harmonics largely intact, sounding neither too dark nor too bright tonally, nor thinned out or overly saturated in tonal density. Having recently rehearsed Holst’s Suites 1 and 2 for an upcoming concert, I pulled Fredrick Fennel’s traversal on Telarc (LP) and was pleased that the QSE nudged the sounds of brass, wind and percussion closer to the authentic sounds I hear in rehearsal. Even the infamous Telarc bass drum in this early digital recording benefitted: its skin tone was much more in evidence, and I heard less of a ponderous thud. Certain labels that I thought guilty of producing indifferently recorded orchestral works (some Meloydia, Vox, Turnabout) were pardoned courtesy of the QSE. Instrumental timbres sounded more true to life: wiry strings still sounded wiry but less so; astringent brass became at least tolerable, losing some of its grating harshness.



I mentioned before the enhanced imagining and presence with the QSE in place. I failed to mention its salutary impact on the soundstage overall, which expanded in all directions in a wholly natural way. I particularly noticed that the back of the soundstage in orchestral works became more focused and dimensional (since that is where the percussion section resides, I was of course delighted). Malcom Arnold’s Overtures on Reference Recordings features a distantly placed concert bass drum and less distantly placed snare and tympani, and their size and placement in the soundstage sounded spot on when looking at a photograph of the session. Not only that, I could visualize more clearly the expanse of the recording venue. The percussion section in Hanson’s A Composer and His Orchestra took on

greater breadth and focus. I am not a soundstage freak (tonality and dynamics rule the day here) but the QSE came close to converting me.

To harken back to the question posed at the outset, the QSE is the real deal and it will not be spending any time anchoring my favorite beer. Of course, the benefit here will be a function of the number of QSEs employed and where you locate them. Bybee offers a 100% money back guaranty, making the QSE an absolute no brainer of an opportunity to enhance the performance of an already capable system at a modest cost, even if you order several. You will likely find the additional gains in transparency and intelligibility to be more than adequate compensation for the ribbing you will take from your audio buddies for spending \$119.00 on a “coaster”. I was convinced - the QSE six pack I have on loan is staying here.

Reviewing the QSE made me wonder how much more there is to learn about the reproduction of music. Realizing a sonic improvement from manipulation of atoms seems to be an esoteric proposition, but the QSE proves once again that Jack Bybee’s research has paid off. I expect that we will hear more from Jack and his ilk as they dig deeper into the science of quantum physics. Could it be that we have only scratched the surface and exciting discoveries lay ahead?

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SPECIFIC RECOMMENDATION

I continue to be amazed at the rising cost of audio products across the board. It is not just electronics and speakers: accessories are not immune from this seemingly out of control spiral of hyperinflation (just check out the five figure asking price for some equipment racks out there). It is refreshing, then, when along comes a product like the QSE that is effective, affordable, in-obtrusive, and simple to use. No, the QSE will not transform a mediocre system into a RMAF busting show piece. Used in an appropriate set up though (and in sufficient numbers), the QSE will make a positive difference that far eclipses the modest price of admission. In that context, the QSE's moniker is apt: it is definitely an "enhancer" - to your enjoyment of music, that is!

Who should test drive this product? Anyone who doesn't already have a custom tuned stereo listening room. We suggest you start with the six pack. At \$119 each, that's only \$714, still well within "Cheap Bastard" territory and could well launch your system into "rich bastard" realms.

Bravo, Jack! Now if only the QSE could turn a Miller Lite into a Trappist beer!

Because of the extreme value we see and hear in the Bybee Technologies Quantum Signal Enhancer, we give it our rare **MAXIMUM MOJO AWARD**.



Equipment used:

VPI Classic 2 with Benz Micro SM cartridge, ARC PH 3 SE phono preamp, ARC LS 25 Mk II line stage, ARC VT 100 Mk II amp, Oppo 105 PDB Universal player, Wilson Audio MAXX II speakers, Chang Lightspeed power conditioner, Transparent and Nordost cabling.

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