

Electronically reprinted from October 2005

## Peak Consult Empress

LOUDSPEAKER

Wes Phillips



The Peak Consult Empress loudspeaker.

**DESCRIPTION** Three-way ported floorstanding loudspeaker. Drive-units: 1", non-ferrofluid-cooled Scan-Speak soft-dome tweeter; 4" midrange cone; 8" woofer cone. Crossover frequencies: 200Hz, 3800Hz. Frequency range: 29Hz–30kHz, –3dB. Sensitivity: 90dB/W/m. Impedance: 7 ohms.  
**DIMENSIONS** 42.5" (1090mm) H by 11.5" (295mm) W by 15" (385mm) D. Weight: 146 lbs (66kg).  
**FINISHES** Standard: rosewood, oak, beech. Special solid wood types: walnut, high-gloss piano black, silver metallic.

**SERIAL NUMBERS OF UNITS REVIEWED** 3112 A/B.

**PRICE** \$25,000/pair. Approximate number of dealers: 5.

**MANUFACTURER** Peak Consult, Langelandsvej 12, DK-5500 Middelfart, Denmark. Tel: (45) 64-400-580. Fax: (45) 64-400-680. Web: [www.peak-consult.dk](http://www.peak-consult.dk). US distributor: Signals SuperFi LLC, Atlanta, GA. Tel: (678) 528-8077. Fax: (678) 884-1167.

I'd heard rumors about Peak Consult. John Marks was all a-burble, having reviewed the InCognito in "The Fifth Element" in the September 2003 *Stereophile* ([www.stereophile.com/amplificationreviews/932/index2.html](http://www.stereophile.com/amplificationreviews/932/index2.html)), but I'd never actually *heard* anything designed by PC's Per Kristoffersen. Therefore, when US distributor Chris Sommovigo proposed that I audition the \$25,000/pair Empress, I was intrigued. Well, who wouldn't be?

But, as anyone who has ever been talked into a blind date will attest, getting fixed up with a complete stranger can be intimidating. Obviously, what I needed was the audio equivalent of the "safe" first date, hooking up in neutral territory—someplace where the Empress or I could safely withdraw if the chemistry weren't right. As it turned out, PC's American distributor, Signals SuperFi LLC, had sent a pair of the Danish speakers to Sound by Singer, where store owner Andy Singer was on his own blind date—which has since developed into an ongoing relationship.

And before I put that metaphor to bed, let me just say that the Empress wound up going home with both of us—even if I do come off as less than a gentleman for saying so.

### **I am one of the people who love the why of things**

The Peak Consult Empress is a reasonably compact (42.5" H by 11.5" W by 15" D) floorstander with a rear-firing port. Its drive-units comprise a 1"-diameter, non-ferrofluid-cooled ScanSpeak soft-dome tweeter, a hand-built 4" Audiotechnology midrange, and a proprietary, hand-built, 8" Audiotechnology woofer. Per Kristoffersen worked closely with Audiotechnology's Ejvind Skaaning's son, Per, on the midrange and woofer designs.

The Empress's cabinet is made of HDF with separate subenclosures for each driver and the crossover, the latter varying in thickness from 1.5" to 3". All of this is sheathed in 1"-thick hardwood—not veneer—chosen by Danish woodworkers using the “knuckle-tap” test. Rosewood, oak, and beech are standard; my review pair was clad in gorgeous walnut. The cabinet's multifaceted baffle is covered in pebbled leather. Removable grilles are provided, but I didn't use them in the audition.

Kristoffersen describes the crossovers as an acoustical second-order filter for the tweeter/midrange section and a second-order for the transition from the midrange to the bass. The crossover points are 200Hz

and 3800Hz. All solder is silver, and the wire is Stereovox's silver elliptical tubing (SET) in air-articulated Teflon tape. The Empress is biwireable.

**Oedipus, have you ever been fueled by passion?**

The Empress is rated at 90dB sensitivity, so I didn't think twice about simply popping them into the system I'd used for my review of the Ayre C-5xe universal disc player in the July 2005 issue, which included Ayre's K-5xe preamp and V-5xe 150Wpc power amp. After moving the speakers around a bit in my 13' by 25' by 8' living room, I found the best combination of bottom end, detail, and focus came with the speakers slightly

toed in and 37" from the sidewalls, 57" from the front wall, 57" apart, and 13' from my listening position.

After several weeks of listening to the all-Ayre system, I began playing around with other components. Introducing the Conrad-Johnson ACT2 made a huge difference in soundstage depth, and ditto the Moscode 401HR—the Empresses really seemed to like tubes. The 200Wpc Moscode really clicked with the Peak Consult, causing me to wonder if it's a speaker that likes to be spanked a bit. When I later added the Tom Colangelo-designed, 200Wpc Viola Labs Symphony amplifier to the system, it seemed to confirm this, although Chris Sommovigo tells me that *he* uses one of Manley Labs' power

MEASUREMENTS

The Peak Consult Empress was too heavy for me to lift it on to a high stand for the farfield acoustic measurements. I therefore had to window out the reflection of its sound from the floor in front of it, which will limit the midrange resolution of the response measurements.

With that caveat in mind, the Empress's sensitivity was slightly higher than average, at an estimated 88.5dB(B)/2.83V/m, though this is less than the specified 90dB. Its impedance remains between unusually narrow limits (fig.1), only rising above 6 ohms above the audioband and never dropping below 4.4 ohms. Its electrical phase angle is also small, with the only questionable combination of low magnitude and high phase angle occurring at 31Hz: 5.4 ohms and -45 degrees. Even then, music rarely has high energy at this frequency, meaning that the Empress will be a relatively easy amplifier load.

The traces in the impedance graph are free

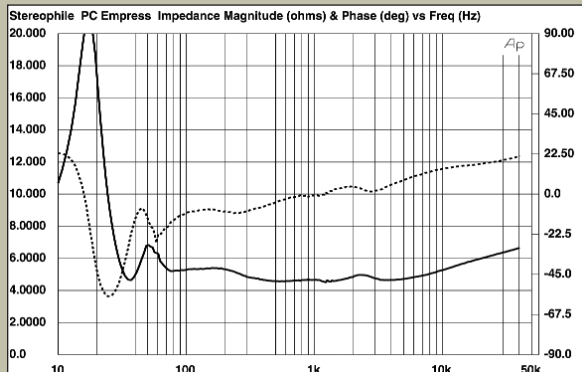


Fig.1 Peak Consult Empress, electrical impedance (solid) and phase (dashed). (2 ohms/vertical div.)

from the midrange wrinkles and discontinuities that would indicate the presence of cabinet resonant modes (though something suspicious is happening around 1.2kHz). Examining the vibrational behavior of the cabinet panels—those that

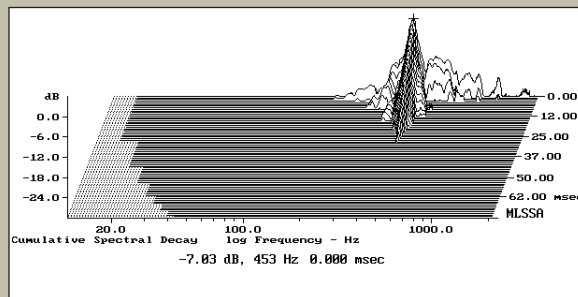


Fig.2 Peak Consult Empress, cumulative spectral-decay plot calculated from the output of an accelerometer fastened to the cabinet side panel level with the midrange unit (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

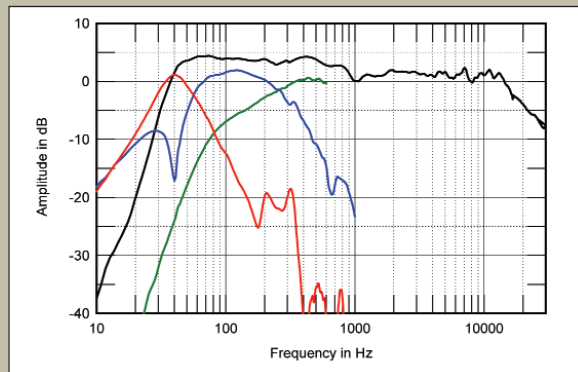


Fig.3 Peak Consult Empress, anechoic response on tweeter axis at 50°, averaged across 30° horizontal window and corrected for microphone response, with the complex sum of the nearfield tweeter, woofer, and port responses, taking into account acoustic phase and distance from the nominal farfield point, plotted below 300Hz, as well as the nearfield responses of the midrange unit (green), woofer (blue), and port (red).

amps in push-pull mode. All I can say is that the Empress displayed the greatest depth, soundstage layering, and inner detail with the 200Wpc amps I threw at it. Your room, your taste, your results may differ—but that’s what happened chez Wes.

**I praise loudly, I blame softly**

My first impression of the Empress’s sound, in that Sound by Singer showroom, was of three-dimensional soundstage reproduction melded to extremely natural tonality. Simple recordings of unamplified music, especially vocals, were scarily convincing—even down to scale. That’s essentially the performance baseline I achieved early on in my audition, as well.

Morten Lauridsen’s *O magnum mysterium*, from Cantus’s *Comfort and Joy: Volume One* (CD, Cantus CTS-2105), made the speakers and my room’s walls “disappear,” creating instead a far larger acoustic jumping with the clangy overtones of 10 unaccompanied voices. This was audio illusioning at its very best—the Empresses didn’t merely re-create Cantus standing in a crescent between the speakers, they reconstructed all of Sauder Hall around them.

Spacious? You have no idea. Neither did I, apparently, as I discovered when I added the C-J ACT2 to the system. And Shunyata Orion loudspeaker cables. And Viola Labs’ silver Cables. In other words, as good as the sound was when I started, I managed to keep

wresting greater and greater amounts of detail and clarity each time I paid attention to a new component. Royalty—go figure.

What consistently knocked me out with the Empress, in fact, was its way with the human voice. Choral groups such as Cantus, solo performers such as Emmylou Harris or Lucinda Williams, craggy male singers such as Elvis Costello—if it was sung, the Empress swung.

My pal Jeff Wong turned me on to the Heartless Bastards with a (legal) download of one of their shows. The sound quality was abysmal—John Atkinson found it so disturbing he threatened to measure the Empress *in situ* to ensure that it wasn’t my room that was causing the problems he heard. (“Oh, that was

were’n’t covered in textured leather, to which my accelerometer refused to stick—revealed a mode at 453Hz on both the top and side panels (fig.2), though this is not very high in level and at this high a frequency is unlikely to be audible.

The saddle centered at 37Hz in the impedance-magnitude trace suggested that this was the tuning frequency of the large-diameter port on the rear panel. However, the notch in the woofer’s output, measured in the nearfield (fig.3, blue trace), lies slightly higher in frequency, at 40Hz. The port’s output (fig.3, red) is a neat bandpass curve centered on the same frequency, implying good if not outstanding low-frequency extension. Though some higher-frequency peaks can be seen in the port output, these are well down in level. The woofer rolls off smoothly above 200Hz, also with very little amiss evident in its upper-frequency response. The midrange output is plotted in green in fig.3, scaled to that of the woofer in the ratio of their radiating diameters, which appears to indicate a crossover fre-

quency slightly higher than the specified 200Hz. Its rollout is initially 12dB/octave but steepens below 80Hz to 24dB/octave.

The top, black trace below 300Hz in fig.3 shows the complex sum of these individual nearfield responses, calculated taking into account acoustic phase and difference in distance from a nominal farfield point. The nearfield measurement technique inevitably exaggerates the upper-bass level, but the Empress can be seen to offer bass extension flat to below 45Hz, with the usual 24dB/octave rolloff of a reflex design resulting in an output down 10dB at a respectable 30Hz.

Above 300Hz, fig.3 shows the farfield response averaged across a 30° horizontal window centered on the tweeter axis. There is the suggestion of a slightly forward midrange, but owing to the limited resolution mentioned earlier, this must remain a suggestion. But above 1kHz the Empress’s response on this axis is impressively

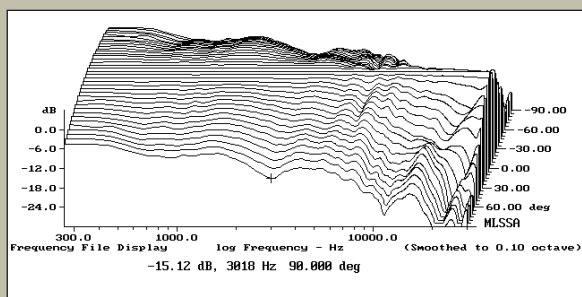


Fig.4 Peak Consult Empress, lateral response family at 50", normalized to response on tweeter axis, from back to front: differences in response 90–5° off axis, reference response, differences in response 5–90° off axis.

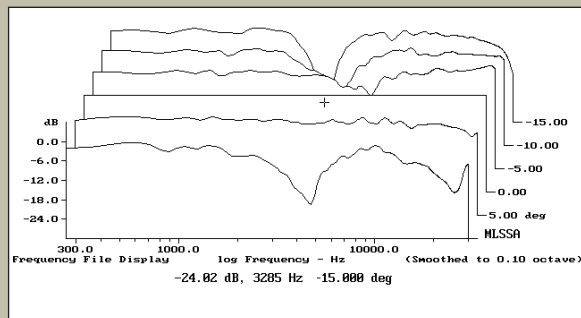


Fig.5 Peak Consult Empress, vertical response family at 50", normalized to response on tweeter axis, from back to front: differences in response 15–5° above axis, reference response, differences in response 5–10° below axis.

an MP3," he sighed in relief.) But there was something there, and when I brought home *Stairs and Elevators* (CD, Fat Possum 1019), it was obvious what it was: Erika Wennerstrom's amazing voice. Her raw wail is like a combination of Jeff Buckley and Robert Plant, backed by a three-piece band (she's the guitarist) that channels the best elements of the Strokes and the White Stripes. Wubbawubba.

Husky, raw, primordial, and compelling, Wennerstrom's singing is almost too personal to bear—right up to the point where you realize that it might be the most committed singing you've ever heard. Maybe you won't react that way, but by track 5 ("Runnin' ") I was hooked, and by "Pass or Fail" two tracks later, I was head over heels.

Here's where we get back to the Empress: It was a great rock'n'roll loudspeaker. Even *Stairs and Elevators* isn't all that well engineered, a detail that it wouldn't take a \$25,000 pair of loudspeakers to reveal, but a lot of high-performance speakers wouldn't let you get past that. I'm sure you've heard audiophiles complain, "My system is so good I can't even listen to most recordings!" Squeeze me? That's not good—that's broke!

Yes, a good hi-fi will reveal whether or not a recording is technically good—and given our druthers, we'd all prefer to listen to the good stuff. Unfortunately, a lot of the good stuff doesn't sound as good as we'd like it to. I, for one, don't want my hi-fi deciding which records I can and can't listen to, which is why

I was delighted that the Empress let me hear the passion and power of Wennerstrom's voice even as it clearly illustrated that the Heartless Bastards got what they paid for when they budgeted \$400 for recording *Stairs and Elevators*. Oh yeah, the Peak Consults can rock and roll.

Speaking of clanky, I stumbled across my copy of *Stereophile* webmaster Jon Iverson's *Altemesia* (CD, Momentum/M•A Recordings M3) while seeking demo material, and listened to JP's great grunge gamelan disc for the first time in a long while. Holy cow—I hadn't remembered it sounding anything like *this*. From the disc's slowly swelling gong washes to its breakneck percussive core, *Altemesia* put the Peak Consults through the wringer, alternating

flat and uniform, which, all things being equal, correlates with a neutral treble balance.

In a room, of course, all things are not equal, and a loudspeaker's dispersion plays as strong a role as its on-axis response in affecting the perceived tonal balance. However, the Peak Consult Empress's horizontal dispersion is textbook in nature, with uniform, evenly spaced contour lines and only the slightest hint of off-axis flare at the bottom of the tweeter's passband (fig.4). However, the speaker does become quite directional above 8kHz, due to the tweeter's fairly large radiating diameter. This will tend to make the speaker sound too mellow in large rooms. In the vertical plane (fig.5), a strong suckout develops more than 5° above and below the tweeter axis.

In the time domain, the Empress's step response (fig.6) indicates that the tweeter and woofer are connected with positive acoustic polarity and the midrange unit in inverted polari-

ty, each unit's step smoothly handing off to that of the next lower in frequency. This is associated with the smooth frequency-domain integration already seen between the drive-unit outputs. And other than a low-level mode at 7.1kHz, probably associated with the midrange unit's cone, the spectral-decay waterfall plot on the tweeter axis (fig.7) is simply superb, with a clean, rapid decay of the sound evident in the treble.

The Peak Consult Empress offers impressive measured performance overall, indicating some respectable audio engineering talent. I didn't test the speaker's distortion, but it is fair to conjecture that the dynamic limits of its single 8" woofer probably restrict its overall dynamic range, given how clean the speaker appears to be in the midrange and treble. But in rooms of small to medium size the Empress will be a strong contender.

—John Atkinson

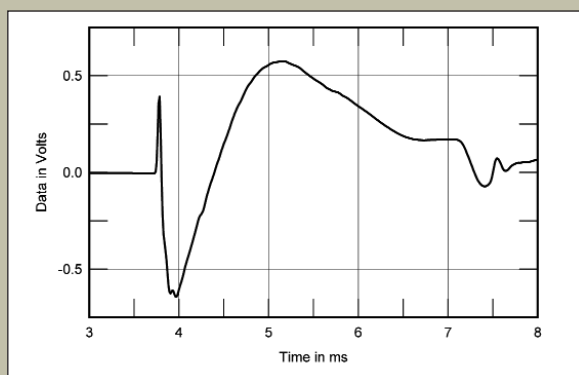


Fig.6 Peak Consult Empress, step response on tweeter axis at 50" (5ms time window, 30kHz bandwidth).

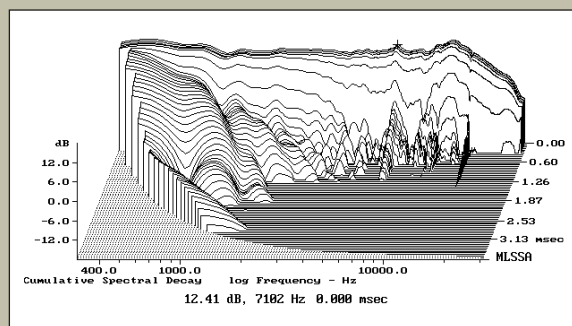


Fig.7 Peak Consult Empress, cumulative spectral-decay plot at 50" (0.15ms risetime).

the extended decay of its bells and chimes with its deceptively deep (occasionally enhanced) bass pulse. This is really hard music to reproduce—it requires a combination of harmonic delicacy and profound authority. To my surprise, the Empress supplied both.

I was surprised because my first impression of the speaker had been one of delicacy and elegance. I *knew* the Peak Consult could reproduce timbre and soundstaging from the first time I heard a pair of them, but it took me quite a while to pick up on how ungim-micked the speaker's bass and dynamic response were. *Alternesia* was a wake-up call.

So it was time to pull out the big guns, such as the recently remastered—sonically transformed and re-edited by engineer Paul Blake-more, really—Mahler Symphony 2 by the Saint Louis Symphony Orchestra under Leonard Slatkin (SACD, Telarc SACD-60081). I've always liked this performance, especially Maureen Forrester's contralto, which seems spot on and slightly vulnerable. The new SACD, transferred from the 50kHz Soundstream master, has a sense of space and quiet power that is spectacularly natural. The offstage fanfares sound as if they're coming from another room. Yes, I know that's the point, but most recordings merely place them

somewhere off to the side of the central orchestral image. The Empresses made them sound as though they came from a room I don't even have.

And the dynamic range, from the almost inaudible entrance of the chorus in the final movement to the last explosive tutti, was phenomenal. In fact, I'd have to call that the Empress's best feature. No, that would be the timbral neutrality. No, it was the seamless soundstaging. Ah, the heck with all that—it had to be the balance of all those elements.

It didn't hurt that the Empress is good-looking, too. There really is something special about the level of woodworking craft involved in these speakers. I feel almost shallow even bringing that up, but the Peak Consult Empress *does* cost \$25,000/pair. The main point, of course, is how they sound, but if I were going to spend that kind of money on a pair of loudspeakers, they'd *better* look good. The Empress does—not in some wiggled-out modern way, but in a straightforward manner that won't clash with your Stickley Morris chair.

While auditioning the Empress I truly enjoyed its sound, but I kept obsessing over that price tag. Twenty-five large is not the most expensive loudspeaker I've ever auditioned, but it sure isn't inexpensive. Heck, it's not even affordable for me or the crowd I run with. Maybe it is for you. Whether it is or isn't, I suspect you'll know *that* long before you decide whether or not you should consider them.

It finally occurred to me that it wasn't the question of value that was bothering me—I reckon that's for you to decide for yourself—it was my awareness that the weak US dollar has made the Empress more expensive here than it would have been a year or two ago. But that's beside the point in evaluating the Empress' performance, which I found seductive.

### Should I pluck it, my hands would defile the flower

Why was it unfair of me to be thrown so far off by the Empress's price? I didn't have the same inner conflict over the Dynaudio Evidence Temptation (\$30,000/pair) or Aerial 20T (\$23,500/pair)—precisely the competitive neighborhood the Peak Consults belong in. Not, I hasten to add, because they're similarly priced, but because that's the level of *quality* I'm talking about. If you've got a really big listening room, you might be better off with the Dynaudio or Aerial, both of which seem to play louder and deeper than the Empress. Surprisingly, all three speakers are rated within 1dB of one another at their bottom limits (PC, 29Hz; Dynaudio and Aerial, 28Hz), but the Evidence Temptation takes the prize in my listening room for per-

ceived bass impact.

In its ability to shake my house's foundation with its impact and pedal-to-the-metal dynamic extension, the Evidence Temptation has had no peer in my listening room. But other than a time or two when I was torture-testing the Dynaudio, that's not something I've had much occasion to require. For the sort of listening I do day in and day out, the Empress satisfied.

The Empress's deep bass was warmer and a tad woollier than the Temptation's or the 20T's—not a huge indictment in my book. Mostly what impressed me down there with the Empress was what I *didn't* hear—such as extra emphasis caused by ripples above the port resonance. JA's measurements may force me to eat these words, but I'm guessing the Empress doesn't add a lot of cabinet noise where it's too audible.

At the other extreme, the Empress didn't have a prominently forward tweeter, as seems to be the fashion these days. I'm thinking here of the seductive but ultimately too-hyped detail I hear from the Dynaudio Special Twenty-Fives, which I've been listening to lately. (Where'd that one come from? Every reviewer needs a near-reference, stand-mounted two-way for those times when he wearies of moving 150-lb floor-standers around his listening room.)

In fact, in its precision and balance, the Empress reminded me of nothing so much as a speaker that combined the ideals of a precision minimonitor with a speaker that actually goes down to 30Hz. And because it's one heck of a lot smaller than the Evidence Temptation or the 20T, that might be the best way to think of it: as a full-range compact loudspeaker.

### The throne is a glorious sepulcher

The Peak Consult Empress is a pretty special loudspeaker. It may not be your cup of tea if you relate to a specific sort of speaker "sound"—the Empress ain't got one of its own. And I've heard from other speakers more extended highs; deeper, tauter bass; and greater SPLs. What I haven't heard is many speakers that do so little wrong or so much so very right. The key to such rare overachievers is balance.

If the standard is whether or not I would live with a speaker, the Empress is about as highly recommended as they come. If the standard is whether or not I could see myself buying them, that's a different matter—one predicated entirely on the vagaries of my being an ink-stained wretch, and a freelance one at that.

Would I buy 'em if I *had* \$25 grand? Oh, heavens to Betsy, yes. It wasn't love at first sight, but I could listen to the Empress for a lifetime. ■

## ASSOCIATED EQUIPMENT

**DIGITAL SOURCE** Ayre C5-xe universal disc player.

**PREAMPLIFIERS** Ayre K-5xe, Conrad-Johnson ACT2, Viola Labs Cadenza.

**POWER AMPLIFIERS** Ayre V-5xe, Coda S5, Moscode 401HR, Viola Labs Symphony.

**LOUDSPEAKERS** Aerial 20T, Canton Vento 802 DC, Dynaudio Evidence Temptation, Dynaudio Special 25.

**CABLES** Interconnect: Cardas Audio Golden Reference, Shunyata Research Aries & Antares, Viola Labs Silver Balanced. Speaker: Cardas Audio Golden Reference, Shunyata Research Lyra. AC: Cardas Audio Golden Reference, Shunyata Research Anaconda & Orion.

**ACCESSORIES** Shunyata Research Hydra AC power-distribution system; Solid-Tech Rack of Silence equipment stand, Feet of Silence & Discs of Silence equipment supports; Ayre Myrtle Wood Blocks. —

Wes Phillips

## Peak Consult Empress

Editor:

I am writing to thank Wes Phillips for taking the time to review the Peak Consult Empress loudspeaker, and also to thank John Atkinson for his measurements and technical observations.

"In fact, in its precision and balance, the Empress reminded me of nothing so much as a speaker that combined the ideals of a precision minimonitor with a speaker that actually goes down to 30Hz," wrote WP. For those of us who have, at one time or another, fallen under the spell of a truly great monitor, this statement speaks volumes. In fact, when I heard the first Empress at our CES show together in 2004 (Stereovox, Peak, Lamm, Classé), I was really struck by how this three-way floorstander was able to completely "disappear" and project a huge, deep soundstage while maintaining living, breathing, three-dimensional images within. Before I heard the Empress, I was convinced that this kind of performance was the exclusive domain of finely crafted two-way monitors.

Coupling WP's listening notes ("This was audio illusioning at its very best...") with JA's "Measurements" notes ("The Peak Consult Empress offers impressive measured performance overall, indicating some respectable audio engineering talent") reminded me of my first impression of Peak Consult's engineering philosophy: namely, that Peak offers a "have your cake and eat it, too"

proposition. They do that voodoo they do so well without compromising the technical parameters—they pull off the incredible magic of minimonitors while stitching together a completely and believably organic full-range picture. I continue to be infatuated with their performance and their technical prowess.

Most *Stereophile* readers are likely not aware that Peak Consult has been around for almost 10 years (it was founded in 1996), or that Per Kristoffersen has established for himself quite a reputation in his native Denmark and throughout Scandinavia. His original commercial monitor, the InCognito (*Stereophile* "Recommended Components," Class A), remains a best-seller for him throughout Europe and Asia. If one wants to understand the core sound of Peak speakers, one need only hear a pair of these very special monitors.

For those who require china-cabinet-quaking bass, there exist models above the Empress that will achieve this without sacrificing the basics of musical resolution. The essential soul of a Peak speaker, no matter how large or seemingly complex, is the magic of a truly superb two-way "point-source" monitor. Many have tried but few have achieved this. I believe Peak's accomplishment is a superlative example of musical achievement.

I'm grateful that we were given the opportunity to share Peak Consult with Wes, John, and *Stereophile's* readership.

Chris Sommovigo  
Signals SuperFi, LLC

Editor:

I would like to thank you for the review of our Empress speaker. You have put a lot of time and effort into this review, and I respect that a lot. The design is as you describe it, very conservative, and that is a correct description of our designs.

We make speakers to last for a long time in people's homes, but also never to interfere with the design or behavior in reproduction of what it all comes down to: music. These days, a lot of consumers are accustomed to speakers looking very fancy in all kinds of ways, but as a speaker designer you can see by just one look: They do not have any time alignment and there is no way they can have the musicality and phase behavior to reproduce music. This is, of course, my way of seeing things as a manufacturer of speakers; a lot of people would see it other ways. That's the great thing about hi-fi.

*Measurements:* Again, thank you for a very thorough test of our speakers. As you can see, it's a very easy load for any amplifier, and that's one of our prime goals. You should be able to use our speakers in any system; therefore, our speakers love tubes but behave the same way with solid-state. In my humble opinion, that is a good sign for any system.

Per Kristoffersen  
President, Peak Consult