

 **PhantomFocus System**

 **Carl Tatz Design**
Acoustic Design, Analysis
& Implementation

The Ultimate Monitoring Experience

Revolutionary Monitoring Solution
...With Any Monitors

“Awesome”

Elliot Scheiner – Engineer
(Foo Fighters, The Eagles, Steely Dan)



Willisoundz II, Nashville, TN



There is no more important element in a control room than accurate monitoring.



Yes Master mastering, Nashville, TN, with Lipinski monitors in a Mid-Field PhantomFocus System

The award-winning Blue Grotto, Nashville, TN, with Dynaudio M3 and M1 monitors in a Dual PhantomFocus System



“The PhantomFocus™ System (PFS™) addresses the sonic response of the Acoustic Trinity™ — the relationship between the speaker, the listener and the room — as a single entity, as if it were a new speaker being designed on a test bench in an audio lab, rendering the ultimate monitoring experience. Attempting to optimize these three elements independently rather than by their sum in a monitoring system, is tantamount to acoustic sacrilege and challenges the laws of physics.” — Carl Tatz

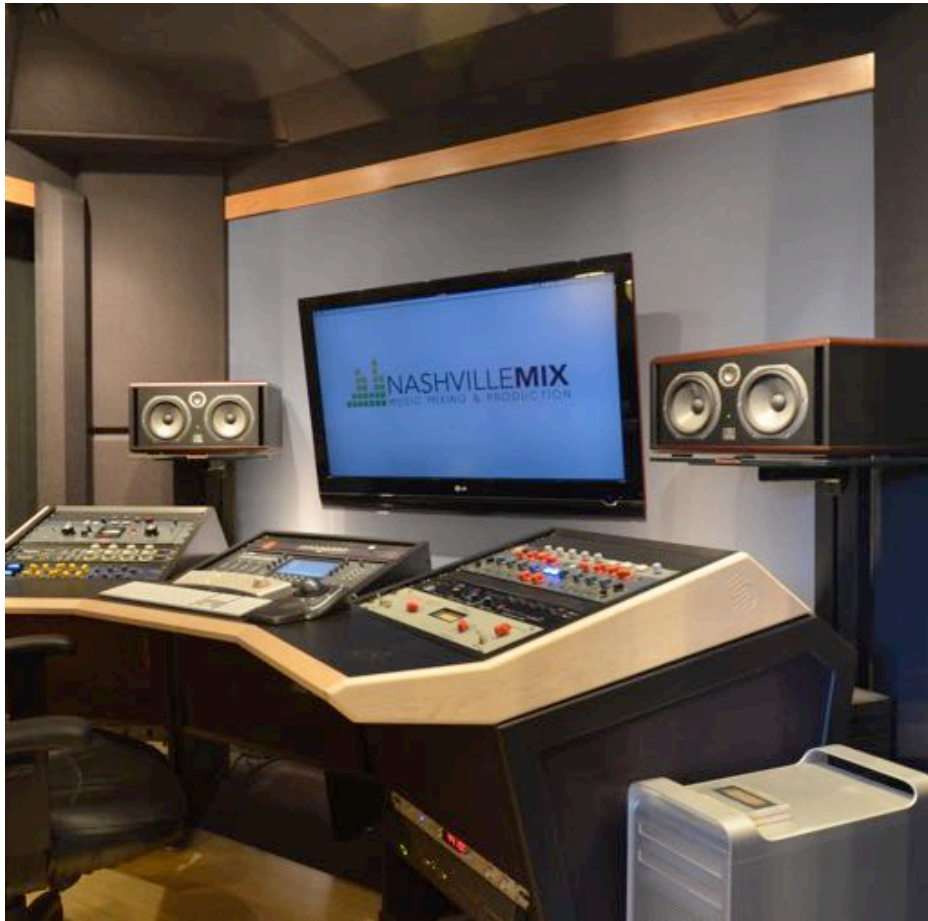
Great speakers in a great room do not equal great monitoring.

Although proper acoustic treatment in a control room is vital to good monitoring, a common myth is that it will “tune” your speakers to accuracy.

Our experience implementing dozens and dozens of PhantomFocus Systems in every imaginable control room environment – from bedrooms to million-dollar recording complexes of our own design or others’ – has taught us this: Great speakers in a great room do not equal great monitoring.

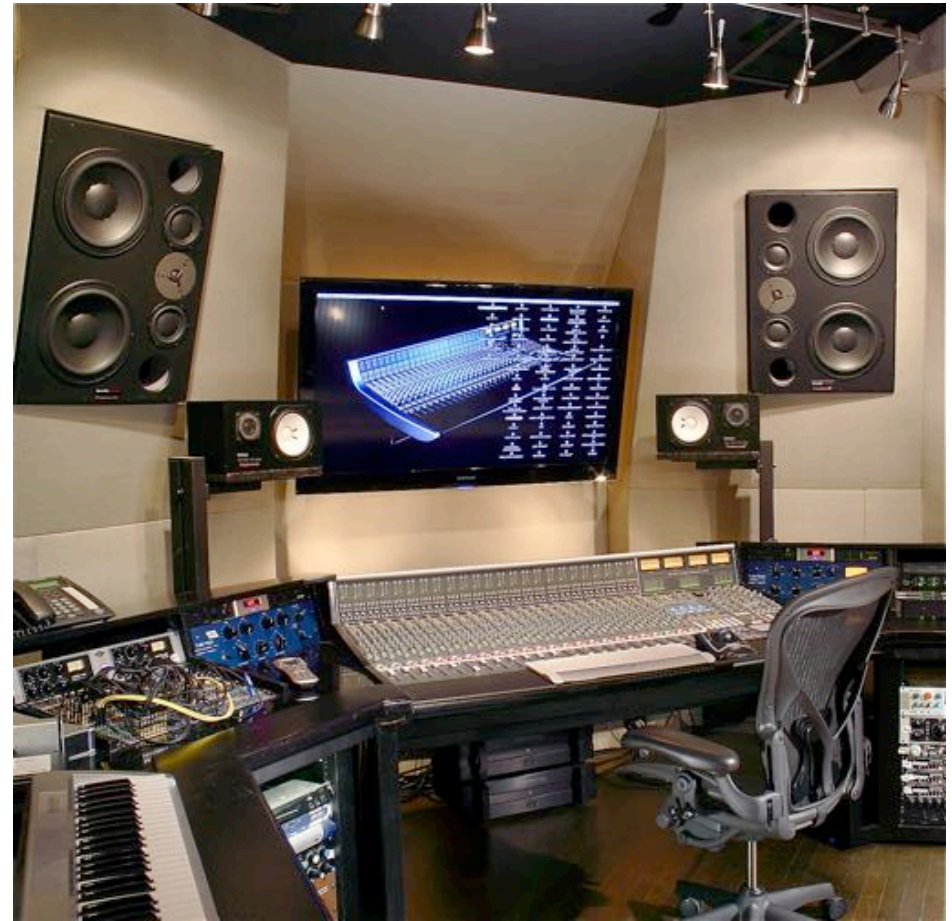
The PhantomFocus System is a custom turnkey solution for studios desiring the highest level of monitoring accuracy in their control room environment – any environment – any speakers!

Utilizing an amalgam of techniques, proprietary protocols, hardware and software, the acclaimed PhantomFocus System is a powerful tool in optimizing monitor systems. Without using any sort of psychoacoustic effects, but rather relying on the laws of physics and powerful high-resolution digital processing, the PFS concentrates on full and accurate frequency response and “reach out and touch the vocalist” imaging where pinpoint detail is spread out before the listener in an almost holographic panorama. Room acoustic evaluation precedes system implementation.



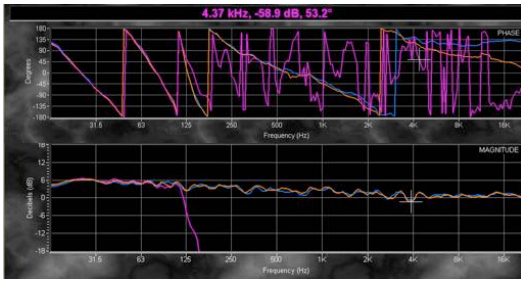
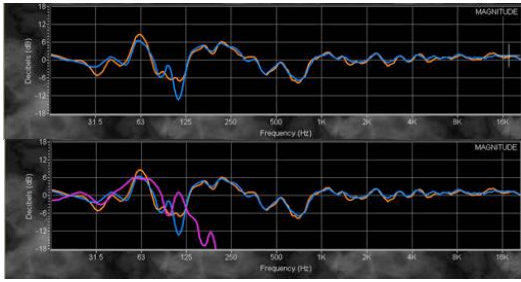
PFS With Focal Twin 6B Monitors

“The PFS is absolutely remarkable. Looking back I feel like I was mixing with only a 3-pack of Crayola Crayons, but now I've got the entire spectrum to work with which is so much more exciting.”
– Eric Brengle – Engineer/Producer/Artist, Owner
NashvilleMix, Nashville, TN



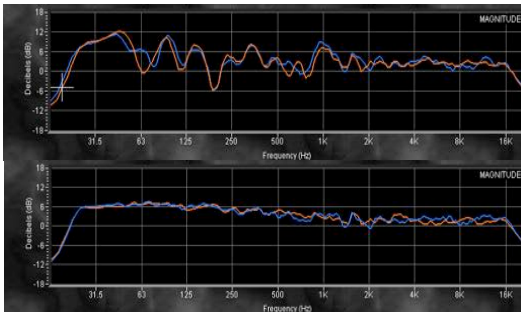
Dual PFS With Dynaudio M3/ Yamaha NS10 Monitors

“After hearing a **PhantomFocus System** using NS10Ms, I was very impressed, and frankly, I didn't expect to be... Awesome!” –
Elliot Scheiner – Engineer (The Eagles, Steely Dan, Foo Fighters)



Top: Typical frequency response of stand-mounted near-field monitors behind console before and after PFS implementation

Bottom: Frequency response of main monitors before and after PFS implementation



Near-field monitoring is the backbone of the studio industry that engineers rely on to make they're tracking and mixing decisions. Some near-field speakers are designed to go down to as low as 30Hz; however, in practice, speaker-stand or console-mounted near-fields will invariably result in a severe dip starting at about 100Hz – 150Hz and then return somewhat to their native low-end extension (see graph to the left). This is due to what is known as the Allison Effect based on speaker designer Roy Allison's work in the early 1970s whereby a low frequency cancellation below middle C is caused by the boundary effects of floor, walls, ceiling and console bounces, as well as axial room mode interaction. Therefore, making comments or decisions about low-frequency information is a little like *The Emperor's New Clothes*, and of course it's not just the low-end being distorted by these issues.

This dip cannot be EQed to accuracy because of the severe loss of headroom that a 10dB -15dB boost would create for a monitor's drivers. The careful inclusion of subwoofers relative to phase and crossover points and slopes is the solution to the problem. However, without proper implementation techniques, **what you end up with are inaccurate speakers with more low-end.**

This is why several speaker manufacturers have offered "auto-tune" DSP to their monitors in an attempt to ameliorate or at least temper these problems, because they realize that it is impossible for them to build a monitor that is immune to fluctuating real-world conditions.

However, it is also impossible to design "auto-tune" that can be as aggressive and as intuitive as it needs to be. It would be like being able to buy a "mix" software program where you could simply press a button for "Rock," "Pop," "Jazz," "Country," "Hip-Hop," etc., depending on the project you were working on, and it would come out perfect every time.

Introducing the PhantomFocus System – where near-fields become mains

Traditionally, large monitors in studios have been used to "see what the low-end is doing," and near-fields are used most of the time to make the sonic decisions, with or without a subwoofer.

With the PhantomFocus System, now the engineer can enjoy the intimacy and impact of near-fields along with the enveloping low end of large in-wall monitors – the perfect combination. However, the system goes well beyond that in two ways:

One – For the first time the listener will be hearing the proven PhantomFocus target curve applied to the now accurate, anechoic chamber frequency response of his speakers in his control room environment with imaging that has to be heard, not explained (see testimonials page 7).

Two – The low frequency extension of the system will be typically around 20Hz – 25Hz. Surprisingly, many large soffit monitors do not go that low.

A **Mid-Field PhantomFocus System** offers the same qualities as the near-field system but with an enlarged sonic image and longer throw. These systems have been implemented in mastering suites and often used in **Dual PhantomFocus Systems** where the near-field and mid-field speakers share the same subwoofer system but are tuned separately.

A **Mains PhantomFocus System** may be configured several ways including a **Dual PhantomFocus System**.



Near-Field System

The most popular **PhantomFocus System** choice offers the frequency range of large mains but with the intimacy and impact of near-fields. Here the **PFS** is coupled with Dynaudio M1 monitors and a **Carl Tatz Signature Series™ by Auralex** control room acoustics package creating the **PhantomFocus MixRoom™**, where a former bedroom is transformed rendering spectacular results, down to 25Hz.

“In my career, I have been privileged to work in studios all over the world, but the experience of using my **PhantomFocus MixRoom** trumps them all - and at a very affordable cost.” – **Dream Room Owner/Engineer Bob Bullock (Shania Twain, George Strait, Reba McEntire)**



Mid-Field System

Mid-Field Systems deliver the same full frequency response as the Near-Field System but with a wider and larger image. Pictured, a **PFS** is used here with a pair of Quested monitors at Full Moon Studios.

“Carl Tatz installed a Mid-Field **PhantomFocus System** in Full Moon Recording’s ICON control room, utilizing the existing Quested HQ210s. The results have been amazing; mixes now have unreal stereo imaging and insane bass response. The **PhantomFocus System** has been the best investment I have ever made in my studio!” – **Ron Ruane – Full Moon Recording, Charlottesville, VA**



Main Monitor System

Depending on the studio’s goals, the main monitors can either be tuned to maximize the existing monitors, have the low end extended or match the low frequency response of the Near-Fields in **Dual PhantomFocus System** (a Near-Field **PFS** will often have a more extended low end than large mains). Pictured here: The Gallery at Reba McEntire’s Starstruck Studios in Nashville with Boxer T5 monitors.

“With the **PhantomFocus System**, Carl Tatz has given our mains new purpose. Incredibly, what you hear is what you’ve got, at any volume – We love it! Our clients love it!” – **Cliff Williamson – COO, Reba’s Business, Inc., Starstruck Studios, Nashville, TN**



All systems using near-fields share identical speaker spacing, tweeter-to-tweeter, enhancing image compatibility from system to system.

The Four Basic Systems:

PFS One: 6,000Watts RMS continuous (10,000 peak Watts), 118dB for control rooms up to 9,500+ cubic feet – 15Hz extension

PFS Two: 3,000Watts RMS continuous (9,000 peak Watts), 115dB for control rooms up to 7,400 cubic feet – 20Hz extension

PFS Three: 2,800Watts RMS continuous (3,500 peak Watts), 110dB for control rooms up to 5,400 cubic feet – 20Hz extension

PFS Four: 1400Watts RMS continuous (2,800 peak Watts), 110dB for control rooms up to 2,500 cubic feet – 20Hz extension

System choice is based on, but not limited to, the desired sonic muscle and cubic footage of the control room. Any system can be implemented in a Near-Field, Mid-Field, Mains or Dual Phantom Focus System.

FAQ

Is the PhantomFocus System some sort of software creating a psychoacoustic effect?

No. Quite simply, it relies on the laws of physics to set up and tune monitors in the listening position, correcting frequency and phase anomalies commonly overlooked in studio control rooms via critical physical alignment and powerful DSP.

Are you using an RTA and graphic EQ to change the frequency response?

Phase and frequency information is measured using a 1/24-octave time domain FFT data analyzer. The tuning is performed by actively adjusting the crossover frequency points, slope and gain while the phase relationship between the speakers and the subwoofer system is continuously monitored assuring a sonically seamless coupling. High-resolution (32 bit/96kHz) digital parametric equalization capable of FIR and IIR filters is applied toward a proprietary target frequency curve followed by a period of critical listening and tweaking as necessary.

What hardware is included in the PhantomFocus System?

All near-field systems include a dual subwoofer system; proprietary formatted digital processor with phase control, crossovers and 68-band parametric equalization per channel;

dampening modules; proprietary PhantomFocus speaker stands; and the PhantomFocus eChair™, which is an integral element.

Mid-field systems include the same elements but may require custom stands that are to be determined per implementation.

Soffited main monitor systems include all of the above without the stands depending on the studio's specific goals.

How long does it take?

Once preliminary consultation and evaluation is complete, on average, two days – the first day for the physical LaserQuad™ alignment and the second to tune.

Can I use a PFS One in a small room?

Absolutely. There is no danger of overpowering the room. You will only benefit from higher performance in the low end.

I already have a sub woofer. Can I use that in the system?

PhantomFocus Systems are custom, turnkey monitoring solutions with carefully matched and time-tested components. Optimum performance may not be relied on outside these parameters.

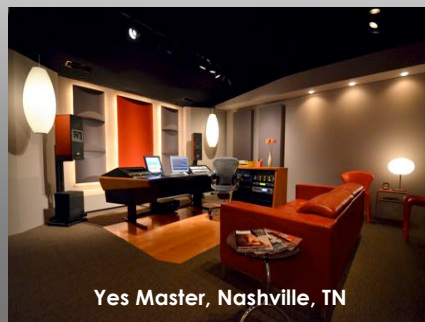
PHANTOMFOCUS™ SYSTEM TESTIMONIALS

“After hearing a **PhantomFocus™ System** using NS10Ms, I was very impressed and frankly, I didn’t expect to be... Awesome!” – **Elliot Scheiner – Engineer (The Eagles, Steely Dan, Foo Fighters)**

“Once you’ve heard Carl’s system, you’ll never listen to music the same way again... **PhantomFocus™** puts you intimately in touch with the vocal in a way I have never heard before. It’s like they are sitting in your lap, singing to you.” – **Jim DeBlanc – Chief Engineer, Beard Music Group, Nashville, TN**

“Carl’s tuning system provides me with the confidence that I am working with a true reference point for my mastering work. Of all the equipment I’ve purchased, **The Phantom Focus™ System** was by far my best investment.” – **Jim DeMain – Chief Engineer/Owner, Yes Master Studios, Nashville, TN**

“The most important component in a mixing or recording environment is the monitoring system. Without accurate monitoring you don’t have the ability to make correct choices. I am truly amazed at the definition of imaging and the tight, clear bottom of the **PhantomFocus™ System** – I hear what is really there.” – **David Thoener – Engineer (Rob Thomas, Sugarland, Aerosmith)**



“Carl’s **PhantomFocus™ MixRoom™** featuring the **PhantomFocus System** is the future of personal studios. In my career, I have been privileged to work in studios all over the world but the **PF MixRoom** trumps them all – and at a very affordable price. Incredibly accurate, professional looking, and a total pleasure to use, it has reduced my mixing time dramatically, and with today’s reduced budgets that’s a big thing!” – **Bob Bullock – Engineer and Owner of The Dream Room Studio (Shania Twain, George Strait, Reba McEntire)**

“I suspect that many of us have actually never heard what recorded music is supposed to sound like. The **PhantomFocus™ System** is a new level of clarity and expression and best of all, my mixes hold up on every system. Thanks a ton, Carl!” – **Jim Mayer – Producer/ Engineer, Bass Player For Jimmy Buffett**

“The **PhantomFocus™ System** is incredibly transparent. When you sit in the sweet spot you can almost reach out and touch the individual tracks. Carl has perfected the art of a professional, accurate listening environment.” – **Jay DeMarcus – Engineer/ Producer - Founding Member and Bass Player of Rascal Flatts, Producer of Chicago XXX**



TESTIMONIALS - continued

“Carl Tatz implemented his **PhantomFocus™ System** with our NS10Ms. We were not prepared for the results... Our mixes travel everywhere and we rarely bother with the mains anymore.” – **Byron Gallimore – Producer/Engineer (Faith Hill, Tim McGraw, Jo Dee Messina, Jessica Andrews)**

“No one has come to this studio without commenting on the incredibly tight low end and the great image detail of the **PFS™**

– except Presley the studio dog. She likes the smooth high end and the treats.” – **John D. Willis – Engineer/Producer, Willisoundz, Nashville, TN**

“The **PhantomFocus™ System** has become the secret weapon of the studio. By allowing me to track and mix with such confidence, it has without a doubt elevated my final product.” – **Erik Herbst – Chief Engineer, The Panhandle House, Denton, TX**

“Carl's **PhantomFocus™ System** brings out the best in my room, and clients love the results. My monitors are no longer liars!” – **Greg Strizek – Engineer, Verge Recording, Nashville, TN**



The Cockpit, Nashville, TN



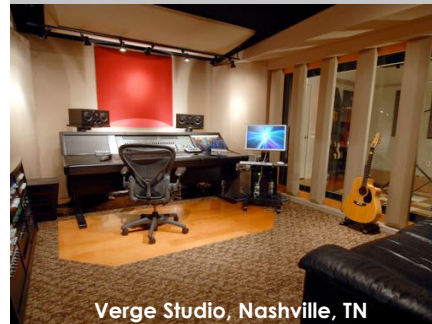
The Panic Room II, Nashville, TN

“Carl Tatz, with his **PhantomFocus™ System**, has managed to create a full-range, accurate, musical listening environment that gives me confidence that my mixes are going to sound the way I intend, no matter the destination. He's done two systems for me, and I love them both.” – **Kyle Lehning – Engineer/Producer (Randy Travis)**

“We installed a **Mid-Field PhantomFocus™ System** utilizing our existing Quested HQ210s. The results have been amazing; mixes now have unreal stereo imaging and insane bass response. The **PhantomFocus System** has been the best investment I have ever made in my studio!” – **Ron Ruane – Full Moon Recording, Charlottesville, VA**

“For the first time in almost 30 years, I now can accurately hear everything that is on and isn't on the records I am making on a daily basis in my studio. Carl's **PhantomFocus™ System** is that revealing. Guessing about the low end is a thing of the past.” - **Ed Seay – Engineer/Producer (Martina McBride, Ricky Skaggs, Hank Williams, Jr.)**

“The imaging and low-end response of the **PhantomFocus™ System** is by far the best I have ever monitored on.” – **John Jaszcz – Engineer (Kirk Franklin, George Clinton, Roberta Flack)**



Verge Studio, Nashville, TN



Starstruck Studios, Nashville, TN

TESTIMONIALS - continued

“The thing that is the most fun for me is how the center ‘channel’ feels like a physical presence; as well, I know that our mixes are translating much better out of the building than they ever have. We’ve got two **PhantomFocus™ Systems**, and we love listening to them both!” – **King Williams – Chief Broadcast Engineer, Grand Old Opry, Ryman Auditorium**

“Carl Tatz Design installed a **PhantomFocus™ System** in our 5.1 editing and mastering suite, totally transforming the listening environment – perfect monitoring – incredible transparency and clarity, all while delivering an almost tactile emotional impact. I’m a total convert to the **PFS**, and have gone on to install it in my Beverly Hills and Malibu screening rooms.” – **Jim Long – Chairman, Crucial Music Corporation (Music Licensing for Film and Television)**

“Carl Tatz and his **PhantomFocus™ System** have taken my studio to a whole new level. For the first time, I can completely trust what I am hearing and know that it will translate beyond my system. In a few short months, my clients have clearly noticed the difference. Not only that, but I simply enjoy going to work more than I ever did before.” – **Derek West – Engineer/ Producer, Fly By West Studios, Nashville, TN**



Willisoundz II, Nashville, TN



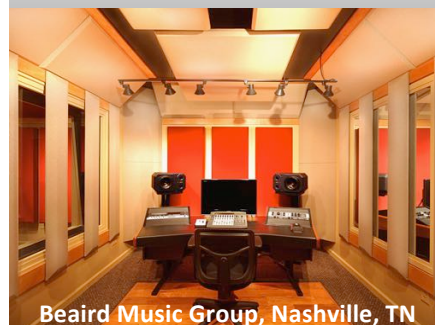
Long Screening Room, Malibu, CA

“Our **Near-Field PhantomFocus™ System** using my existing Tannoy Gold 10s, deliver an accurate, 25Hz-to-20KHz frequency response at the listening position in my control room! It sounds great – I love it, my clients love it, and I know whatever leaves this room will translate well to any other listening environment.” – **Doug Sarrett – Engineer, Uno Mas Studio, Nashville, TN**

“In upgrading our monitor system to accommodate mix work, all our clients said talk to Carl. We did and installed a **Mid-Field PhantomFocus™ System** with Dynaudio M3 Monitors – full tilt, down to 20Hz, with emotional impact, accuracy and amazing imaging!” – **Michael and Laura Morena – Platinum Lab, Nashville, TN**

“The **PhantomFocus™ System** exceeds the expectations of our clients and gives us confidence in knowing that we are hearing the truth in our mix room, surpassing any *big* studio on Music Row.” – **Brian Eckert – Owner, Verge Recording, Nashville, TN**

“With the **PhantomFocus™ System**, Carl Tatz has given our mains new purpose. Incredibly, what you hear is what you’ve got, at any volume. We love it! Our clients love it!” – **Cliff Williamson – COO, Reba’s Business, Inc., Starstruck Studios, Nashville, TN**



Beard Music Group, Nashville, TN



Beard Music Group, Nashville, TN

TESTIMONIALS - continued

“What really pushed me over the edge in making my decision to implement **PhantomFocus™** technology for the monitors I chose for my new room, was a visit to The Grip, belonging to Jay DeMarcus of Rascal Flatts. After being very impressed with the system in the A room, Carl led me to a small editing suite within the personal studio complex called The Cockpit that measured seven feet by nine feet with a slanted ceiling and four-foot-high front wall. I thought to myself that there was no way that this was going to sound anything like what I just heard in the main room. However, when I sat down in the engineer’s chair I was not prepared for what I heard – the same tight low end down to 25Hz, pinpoint imaging and reliable frequency response in this essentially ridiculous space – I was sold!” – **John Merchant – Engineer/Producer and Educator (Barbra Streisand, Michael Jackson, Celine Dion)**

“MTSU’s Recording Industry Department is very happy with our new studios D and E. The work that was done by Carl Tatz Design is outstanding. Along with his proprietary **PhantomFocus™ System** monitor tuning protocol, these two control rooms are now the two best mix spaces that we have on campus.” – **Bill Crabtree – Department Chair, Middle Tennessee State University**



Willisoundz, Nashville, TN



Award-winning Red Door, Nashville, TN



Award-winning MTSU Studio E



Soundscape, Chicago, IL

“This [award for Lecrae’s *Gravity*] is our first GRAMMY® and it is also the first album we mixed on our new **PFS™**. We owe a big thank you to Carl for showing us a totally new monitoring experience.” – **Ben Washer – Reach Records, Atlanta, GA**

“It’s clearly the leading technology in monitoring and if I build ten more studios, which I hope I don’t, everyone of them will have a **PhantomFocus™ System** in it – I can’t imagine mixing without it.” – **Monty Powell – Songwriter/Engineer/Producer, Nashville, TN**

“When you can mix from instinct and taste as opposed to compensating for playback anomalies, the sky is the limit. When it’s right on the **PhantomFocus™ System**, it’s right everywhere.” – **Michael Kolar – Engineer/Producer/Owner of Soundscape Studios, Chicago, IL**

“Carl implemented his **PhantomFocus™ System** to shape our critical listening position with pinpoint accuracy and imaging. We now have total confidence in the universal viability of our mixes.” – **Ken Barken – Head of Operations, Thirteen Degrees Studio, Nashville, TN**

TESTIMONIALS - continued

“The **PhantomFocus™ System** is the holy grail of studio monitoring – period... I’ve never had mixes translate as well as they do from this system, and I feel like I have grown exponentially as a mix engineer since Carl brought his genius to our facility in Ohio. During a recent open house, we had a line similar to a new roller coaster at an amusement park. Just like a roller coaster, the facial expressions were priceless. Typically within the first five seconds, the listener will turn around with their jaw wide open. I actually had to show one listener that there was not a center speaker placed behind the video monitor!” – **Mark Abrams – Chief Engineer, Vaughan Music Studios, Columbus, Ohio**

“Well, as Carl will attest to, I was a hard sell. I had SERIOUS problems and doubted anyone could fix them. And the results? He knocked it out of the park with the **PhantomFocus™ System!** It’s simply incredible. The only regret is I wished I had done it sooner. Thanks Carl!” – **Ted Curtis – Engineer/Producer and Owner Upstairs Productions, Oklahoma City, OK**

“It’s as advertised.” – **James Johnson – Musical Director and Chief Engineer, World Wrestling Entertainment (WWE), Westport, CT**



Upstairs Productions, OKC

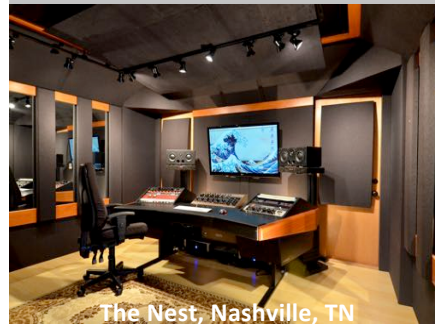


WWE, Westport CT

“Any professional educational facility should take serious notice of the **PhantomFocus™ System**. Our students save so much time not having to second guess their mixes – no more running out to the car or needing to listen on another set of speakers. The **PhantomFocus System** is absolutely invaluable as a teaching tool for our students.” – **Glenn Martucci – CEO Go Media, Olympia, WA**

“For the longest time I would espouse the use of the 7-foot-tall, half-ton behemoths, known as Cadac speakers. I had doubts whether I would ever again hear the clarity and power from those speakers that I used to mix albums like Supertramp’s *Crime Of The Century* or Stanley Clarke’s *Journey To Love* etc. Those doubts have finally been erased after hearing a **Near-Field PhantomFocus™ System** from Carl Tatz Design. At last something new that compares to the best of the past.” – **Ken Scott – Engineer/Producer (The Beatles, Supertramp)**

“What’s really crazy is that, in this little bedroom studio, I now have one of the best monitoring systems in the world – it’s nuts. I have trouble believing it myself until every time I sit down in front of my **PhantomFocus™ System** – it hits me all over again.” – **Ryan McFadden – Engineer/Producer, Nashville, TN**



The Nest, Nashville, TN



Go Media, Olympia, WA

TESTIMONIALS - continued

“After hearing so much about the **PFS™** from people whose ears I trust, I was eager to hear the system for myself. Sure enough, the **PFS** was so far beyond my expectations that it’s difficult to express. It has unparalleled pinpoint stereo imagery and a depth of field that has to be heard to be believed in both the near-field and mid-field **PFSs**. Finally, it’s now possible to really hear all those sonic layers that you take so much time building.” – **Bobby Owsinsky – Engineer/Author**

“A lot of the time, unless you’re building from scratch, you can’t radically change your room. But you **CAN** change how your monitors react in it. Often, what it takes for people to understand the difference is to either come listen to a **PFS™** for themselves, or have someone they really respect recommend it. Everyone who hears it feels the difference is remarkable.” – **Russ Long – Engineer/Producer/Journalist, Nashville, TN**

After listening to his new **PhantomFocus™ System** for the first time, Troy Luccketta turned down the monitor pot, swung away from the console and confronted Carl Tatz with a problem – “There’s a problem here and the problem is that you’re not charging enough for this.” – **Troy Luccketta – Drummer for Tesla, Engineer/Producer, Nashville, TN**



Tesla's Troy Luccketta and Carl Tatz

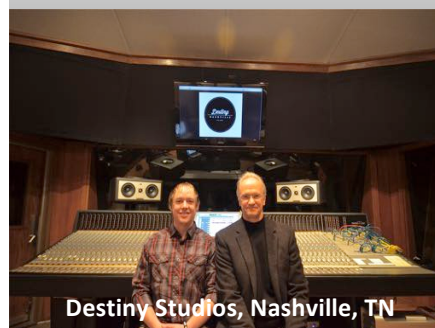


Ken Scott, Bob Bullock, Bobby Owsinski

“I’ve been putting on some pounds since the **PhantomFocus™ System** implementation because I no longer have the exercise of constantly rushing out to the car to check my mixes! Now I can relax and have absolute trust in what I hear, and my mix time is greatly reduced. I’ve had visiting engineers tell me that this is the best monitoring they’ve ever heard – and they’re right!” – **Jamie Rosenberg – Engineer/Producer and Great Divide Studio Owner, Aspen, CO**

“Everyone who uses the control room is blown away by our **PhantomFocus™ System’s** amazingly detailed imaging and accurate tight bottom down to 25Hz. They just don’t expect to hear that kind of performance in such a small room.” – **Kevin Reinen – Chief Engineer, The Ryman Auditorium, Nashville, TN**

“I had never heard anything like this in my life – monitors that were this accurate and enveloping. I could hear EVERYTHING –from 20Hz-to-20Khz – the good, bad, and ugly, and because of that, I knew immediately that I wanted this precision tool in my new Nashville studio. No piece of gear is as valuable as the critical listening experience that the **PFS™** provides. It’s the most important tool in my studio and I couldn’t be more excited with how it turned out.” – **Brandon Metcalf – Engineer/Producer (Secondhand Serenade, Brooke Hogan, and The Classic Crime) Owner, Destiny Studios – Nashville, TN**



Destiny Studios, Nashville, TN



Great Divide Studios Aspen, CO

TESTIMONIALS - continued

“I had no idea what to expect from the **Phantom Focus™ System** and was astonished by the phenomenal accuracy that Carl achieved. My **Dual PFS™** is the most honest way to listen to, or more accurately, experience music. Since the entire frequency spectrum and stereo field are so flawlessly represented, it gives me as an engineer far more power to sculpt a solid and powerful mix. It exposes every nuance of a performance and has completely changed the way I approach song arrangement, recording and mixing. Having heard the **PFS**, I could honestly never go back to a ‘normal’ mix environment.” – **Sean Spence – Engineer/Producer, Owner The Blue Grotto, Nashville, TN**

“The **PFS™** is absolutely remarkable. It’s a difficult thing to describe because most engineers have never been able to hear everything from 20Hz-to-20kHz before without fighting room modes. Looking back I feel like I was mixing with only a 3-pack of Crayola Crayons, but now I’ve got the entire spectrum to work with, which is so much more exciting. There’s no place for frequencies to hide, so my mixes come together better and faster.” – **Eric Brengle – Engineer/Producer/Artist, Owner NashvilleMix, Nashville, TN**



The Wine Cellar, Nashville, TN



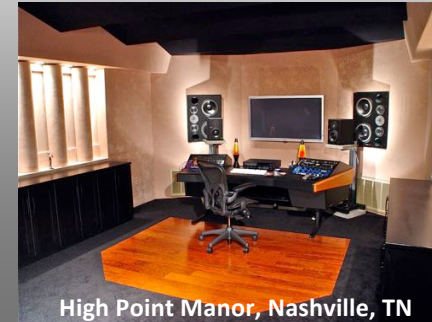
Award-winning Blue Grotto, Nashville

“Since the **PhantomFocus™ System** eliminates all of the factors that confuse the sound, I can trust that I am hearing the *entire* sonic picture. Now that I don’t have to worry about how mixes will ‘translate’, I can focus on being musical and creative...which is the whole point, right?! Initially, because the PFS sounded so amazing, I was concerned that my mixes would only sound great in my studio, on my speakers, since the average listener wouldn’t be listening back on a **PhantomFocus System**. Even bad mixes sounded good to me at first as far as the imaging and pinpoint detail was concerned. However, I soon realized what an incredible tool I had – that I could REALLY HEAR how bad the mix was and exactly what was needed to correct it.” – **Andy Dodd – Engineer/ Producer and Songwriter (Kelly Clarkson, Jeremy Camp, Jonas Brothers), Nashville, TN**

“As a small studio owner, mixing and shaping the bass was always a guess. Mix twice, check it in your car, come back and mix again, check it on your iPod, etc. ... The **PFS™** advertised promise was that I would be able to really hear what was happening, especially in the low-end BETTER than any high-end studio – and I could have it in my basement. – Carl told the truth! – I don’t ever want to mix without a **PFS** again! EVER!!!!” – **Michael Hughes – Engineer/Producer, Multi-instrumentalist/Owner Hartwell Studios, Nashville, TN**



Award-winning Red Decibel East,



High Point Manor, Nashville, TN

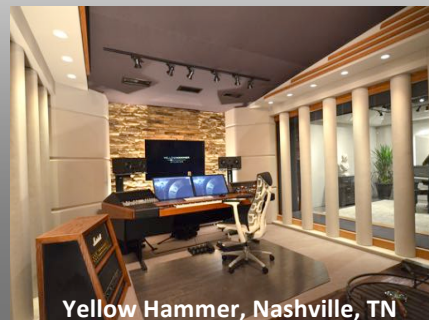
TESTIMONIALS - continued

"As a relatively new-school guy, I came up working in bedrooms with small speakers and headphones. I spent a lot of time and money trying to get my space closer to the enveloping sound I'd heard in commercial rooms. After upgrading monitors, buying bass traps, endlessly repositioning everything in the room, etc., results were noticeable, but meager. Installing Carl's **PhantomFocus MixRoom™**, though, was night-and-day. Everything finally sounds RIGHT. The difference is like making a recipe you found online vs. hiring a world-renowned chef." – **Ed Boyer – Multi-award-winning Engineer/mixer, Producer, Arranger and Owner, Boyer A Cappella, Ridgefield, CT**

"The **PFS™** renders the frequency response, and low end in particular, to be remarkably consistent between mains and near fields and from room to room. In today's environment, where so much work goes on inside the box, professional studio monitoring is one of the most important technologies that we can provide for our students. Adding our ninth PFS to Middle Tennessee State University's Recording Industry Program, our goal is that they will develop astute listening skills. Our students' expectations for their own work and the systems on which they monitor in the field after graduation will both be greatly elevated." – **Bill Crabtree – Professor and Director OM.F.A. in Recording Arts, MTSU, Murfreesboro, TN**



Boyer A Cappella, Ridgefield, CT



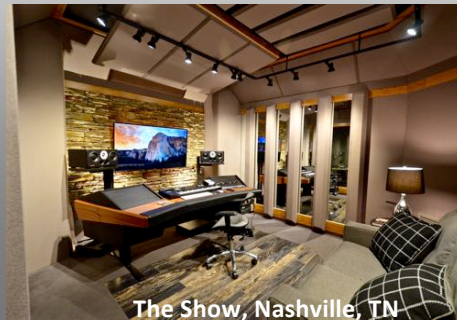
Yellow Hammer, Nashville, TN

"The new **PhantomFocus™ Monitors** in my **PhantomFocus MixRoom™** have completely changed the way I experience music. As an audio engineering student in the process of training and developing my ear, the **PhantomFocus System (PFS™)** allows me to hear an entirely transparent representation of what is coming through my speakers all across the frequency spectrum. The low-end clarity is unprecedented and something that must be experienced to believe, and the stereo imaging it provides blows me away every time I sit down in front of the gorgeous Carl Tatz Edition™ Argosy workstation." – **Josh Bellatti – Engineer/Producer, Owner of The Show, Nashville, TN**

"I've been an audiophile for over a decade, but when I first heard Carl's **PhantomFocus™ System**, I instantly knew that I never truly heard low end until that moment. Now in my **PhantomFocus MixRoom™**, being able to hear a full frequency response accurately down to 20 Hz has allowed me to create fuller mixes and appreciate other producers work like never before. The stereo imaging is the most three-dimensional stereo playback out there. I saw a client recently trying to reach out and touch the sounds coming from the speakers as he listened to the mix we had just completed!" – **Justin Miller – Engineer/Producer, Arranger, Nashville Sampling Company Co-Founder and Yellow Hammer Owner, Nashville, TN**



Award-winning MTSU Studio C,



The Show, Nashville, TN

TESTIMONIALS - continued

"I am so thrilled with my PhantomFocus™ MixRoom! My ears are in HEAVEN! But, I'm hoping to keep the rest of my body vertical for many years so I can enjoy my new toy." – **Michael Hayes – Composer and owner of Ear Candy, a PhantomFocus MixRoom™, Nashville, TN**

"This is my second PhantomFocus MixRoom™ studio designed by CTD and the work that Carl did this time, to create our new studio can be best described as transformational. With his design expertise we were able to take an old boat garage and transform it into a space that combines acoustic recording excellence, creative design, functional work-flow, and of course, with the **PhantomFocus System**, a control room that competes sonically with any in the world. I could not be happier with the studio and the responses I get from client after client are not only complimentary about the space and sound, but more importantly, they tell us that 'this is a space that I want to work in again.'" – **Derek West – Engineer/Producer and Owner of Fly By West, Nashville, TN, recipient of a 30th Annual TEC Award nomination**



Ear Candy, Nashville, TN



Chante Pejuta, Carbondale, CO

"The **Phantom Focus MixRoom™** is amazing. We're listening to music that we've been listening to for years, and now realize we've never really heard it before! No detail is lost, and the imaging is beyond compare. My **PF MixRoom** environment together with the **PhantomFocus System**, makes production and mixing a dream. The first thing we did was remix my entire new album and the difference, between pre and post **PF MixRoom** installation, was night and day. Now I can create with confidence, knowing that the great sound in my room will translate anywhere." – **Joe Heir – Engineer/Producer and Owner of The Shoe, a PF MixRoom™, Olympia, WA**

"Carl's experience and attention to detail were off the charts. His Signature Series acoustic modules by Auralex including the Acoustic Lens were custom installed with great precision. It not only looks great but when sitting in the console chair inside of the **PFS™** sweet spot, the sound is totally amazing. The audio on every track is vividly revealed within a three-dimensional soundscape, which greatly enhances recording, editing and mixing. I could not be more pleased with this creation. Carl, you knocked it out of the park." – **Eaden Shantay – Singer/Songwriter and Owner of Chante Pejuta, a PhantomFocus MixRoom™, Carbondale, CO**



The Shoe, Olympia, WA



TEC Award Nominee, Fly By West,

TESTIMONIALS - continued

"This is Carl's best studio yet for me, and I could not be happier with all aspects of my **PhantomFocus MixRoom™**, including the insanely impressive **PFS**. My only complaint is that the room sounds so amazing and is so beautifully comfortable, I have a hard time getting clients to leave after we're done working." – **Bob Bullock – Multi-Award-Winning Engineer/Producer, Owner of Cool Springs Mix, Nashville, TN**

"This is the third studio that **Carl Tatz Design** has designed and built for us. All of them have been centered on the amazing **PFS™**, which has become irreplaceable for me in a mix environment. Each studio has only gotten better as Carl continues to hone his craft and lead the industry by a wide margin with his custom acoustic designs, his proprietary products and monitoring set ups, right down to the chair you sit in [PhantomFocus eChair™]. Carl's work inevitably leaves his clients in a space that is more accurate, less fatiguing and always ergonomically pleasing to work in." – **Monty Powell and Anna Wilson – Multi-Platinum songwriters, recording artists, and owners of Crane Song, a PhantomFocus MixRoom™, Huntsville, Utah**



"My original **PFS** with the smaller near-fields was stunning but comparatively, the window of sound that the larger **JBL M2s** offer in my **PhantomFocus MixRoom™**, is the sonic equivalent of going from a 15 inch laptop to a 10 foot front projection screen - essentially you're at The Show. Hearing reverb on this system is a revelation — spatial dimension and clarity that leaves me breathless with power to burn. Paired with the **CTD PFS**, the bass is extremely tight and huge and a true inspiration. Be sure you're comfortable before you hit play because once the music starts, you won't want to stop listening for a very long time." – **Tom Snider – Award-winning Composer/Engineer and Owner of The News Room, a PF MixRoom™, Nashville, TN**

"To be honest, we were a little skeptical as to whether or not we were going to hear much of a difference, but now that The Music Group has its own **Dual PFS™** which includes the new **PhantomFocus eChair™**, the songs that I've been listening to for 30 years feel like I'm listening to them for the first time. Listening to music is new and fresh again, and mixing music is easier than ever. I hear width and depth like never before, so getting a mix right is a much quicker process. I never want to work without the **PFS** - thanks Carl!" – **Chris Freels – Engineer/Producer and Owner of The Music Group, Edmond, OK**



TESTIMONIALS - continued

"The accuracy and clarity of the **PhantomFocus™ System** that I am experiencing now is flat-out inspirational! Even at low levels, the aural imaging of the sound is incredibly focused. Carl did a great job!" – **Doug Sarrett – Multi-Award-winning Engineer and owner of Uno Mas Studio, Nashville, TN**

Commenting on mixing the landmark new Elvis album, *Where No One Stands Alone*: "Being fortunate enough to work on a record of an and artist that has stood (and will stand) the test of time, tends to make the listening situation more critical than ever. My **PhantomFocus™ System** not only gave me the articulate precision that the project demanded but also the confidence to trust my sonic decisions." – **Ed Seay – Multiple Award-winning Engineer and Owner of Cool Tools Audio, Nashville, TN**



Doug Sarrett - Uno Mas Studio



Ed Seay at Cool Tools Audio

"I've worked out of my own studio, the mixHaus in Los Angeles for the last six years and always had multiple top-of-the-line speaker systems tuned by some of the leading acousticians in the industry. But I always felt that mixing music should be more effortless and translate better. Enter the Carl Tatz **PhantomFocus™ System**.

Carl and his team came in and tweaked the room, installed my speakers in the best location for this particular room and implemented the **PFS™** for an accurate response down to 25 Hz. The sound staging is impressive and the vocals sound like they are right in front of you, a feeling akin to going from 480p to 4K HD resolution in the video world.

But on top of that, the system doesn't just sound pleasing, it translates expertly. It most certainly gives me peace of mind that what I hear is accurate to what the record sounds like, which shaves off hours from the mix process and results in better mixes all over the map. Client approval is faster, and I can't imagine going back to any other system. I keep recommending it to my colleagues. Thank you Carl for installing the first **PhantomFocus System** on the West Coast at the mixHaus." – **Richard Furch – Multiple Award-winning engineer and owner of the mixHaus, Los Angeles, CA**



Richard Furch – the mixHaus, LA

TESTIMONIALS - continued

"Our last studio fell victim to apartment development on Music Row, which presented both a challenge and an opportunity. In renovating this old warehouse building, we got to start from scratch as we designed and built the studio space as we had imagined. Building a space on a budget means lots of cutting corners, however one area where we absolutely could not cut corners was to install the **PhantomFocus™ System**. Because I had gotten accustomed to working on a PFS in my last studio, I simply couldn't go back. The **PhantomFocus System** paired with the Augspurger monitors, greatly enhances mixing decisions, making them far more accurate, easier, faster and just plain more fun." – **Brandon Metcalf – Engineer/Producer and owner of South By Sea recording complex, Nashville, TN**

"It seemed like a never-ending search for a system that was truly accurate. That search ended with the **PhantomFocus™ System!!!**" – **Tom Keifer – Engineer/Producer, Founding Member of the Band Cinderella, Nashville, TN**

The Vintage King Nashville store received the 29th Annual TEC Award for Technical Excellence & Creativity in studio design for its Carl Tatz Design PhantomFocus MixRoom™



CT & Brandon Metcalf at South



Vintage King, Nashville

Ever since I was a little kid, I had a vision of what music could sound like - what music SHOULD sound like. Carl Tatz's **PFS™** brought that vision to life. As a small studio owner, mixing and shaping the bass was always a guess. Mix twice, check it in your car, come back and mix again, check it on your iPod, etc.... Sometimes I got lucky and it was great, more often though, it wasn't. So I started mixing at the big, expensive studios in town. And I'd end up doing the same thing.

So imagine my surprise and relief when I heard Carl say that he had a way that I could really hear what was happening in the low end BETTER than any of those excellent studios. And I could have it in my basement.

The **PhantomFocus™ System** is the most beneficial investment I've ever made in my recording career. Not only are my mixes better, but also clients are blown away by the sound of their music being played with a clarity and accuracy that they've never experienced before. I don't ever want to mix without a PFS again!!!! EVER!!!! – **Michael Hughes – Engineer/Producer/Multi-instrumentalist/Record Company CEO and owner of Harwell Records, Nashville, TN**



Nothing else...
comes close...



Michael Hughes – Hartwell Studio

PFM HD & UHD-1000 MONITOR TESTIMONIALS

On experiencing the new **PFM™ HD-1000 Monitors**: “I was totally lost in the sound, and felt like I was being enveloped by imaging and the low end of the mix. In one reference mix I could distinctly hear that the upright bass was panned to the left. It was like wearing VR glasses for sound. Everything seemed totally 3D. All I could think was ‘imagine if I could hear the bass in my mix this clearly while sitting in the mix position!’ I wouldn't have to go out to the car ten times to discover that my mix was way off. I could get the mix right the first time!

Another remarkable thing was that I could also turn the playback level way down for quiet monitoring and the **PFM™ HDs** held the sound together beautifully. What a pleasure it would be to mix all day when what you are hearing is so clear and helpful, and doesn't tire your ears.”

“The new **PFM™ HD-1000 Monitors** is the best monitoring I have ever heard hands down. Keep up the amazing work Carl!” – **Lij Shaw – Award-winning Engineer, Music and Podcast Producer, Owner of The Toy Box Studio, Nashville, TN**



Lij Shaw – Toy Box Studio, Nashville



BARH MixRoom PFM UHD-

“I’ve heard a few of Carl’s **Phantom Focus™ Systems** over the years, and they were always quite impressive. Recently, Carl invited me to hear his new system in his latest TEC Award-nominated studio, The Upper Deck. This time it was with his own line of **PFM™ UHD-1000 Monitors, Subs** and electronics. Wow, this is a whole new ballgame! The imaging, depth, frequency response, with what seems like unlimited power makes these the best monitors I’ve ever heard – amazing! I’d say Carl has hit out of the park with his new **Phantom Focus Monitors.**” – **Randy Poole – Award-winning engineer/producer and owner of The Poole Room studio, Nashville, TN**

“Unbelievable, totally unbelievable!!! I’ve never heard anything like this in my life and I’ve heard a lot. The detail, low-end definition, pinpoint imaging, enveloping sound that ‘bathes’ you in a sonic hologram that is so emotional and accurate it makes you giddy. There are the ten greatest monitors in the world and then there are the **PFM™ HD Monitors.**” – **Michael Rodriguez – Award-winning LA Sound Designer**

Mike Rodriguez - Sound Design



Randy Poole, The Poole Room

PFM HD & UHD-1000 MONITOR TESTIMONIALS - continued

The **PFM UHD-1000 Monitors** are sublimely detailed and big sounding but at the same time warm and enveloping.

Listening to them in my PhantomFocus MixRoom, I immediately sense that I'm hearing and feeling just the music, it's like the room and the speakers disappear and I'm in the moment with the music." **Richard Eade – Engineer/Producer/Musician, Owner of BARH Records, Huntsville, AL**

"Upon first listen I was blown away! Each day since, I find myself excited to sit down and start mixing. Music should be an experience, not a technical battle between listener and technology. The **PFM™ HD Monitors** totally removes that veil and reveals the truth. Although my experience with such a precision monitoring system has been brief, we are already producing some of our finest work." – **Jimmy Hill – Engineer/Producer and Owner of Amplified Wax, Spokane, WA**

The new **PhantomFocus™ PFM HD-1000 Monitors** in my **PhantomFocus MixRoom™** have completely changed the way I experience music. As an audio engineering student in the process of training and developing my ear, the **PhantomFocus System (PFS™)** allows me to hear an entirely transparent representation of what is coming through my speakers all across the frequency spectrum. The low-end clarity is unprecedented and something that must be experienced to believe, and the stereo imaging it provides blows me away every time I sit down in front of the gorgeous Carl Tatz Edition™ Argosy workstation." – **Josh Bellatti – Engineer/Producer, Owner of The Show,**



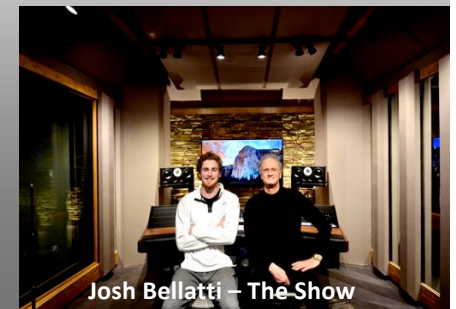
Richard Eade at BARH Records



CT and Jimmy Hill at Amplified Wax



O'Connor MixRoom, Olympia, WA



Josh Bellatti - The Show

PFM HD & UHD-1000 MONITOR TESTIMONIALS - continued

"I had always heard how great the **PhantomFocus™ System (PFS™)** sounded, and after asking Carl to enhance our control room and install his new **PFM™ HD Monitors**, I couldn't be happier. Sounds great and looks beautiful. Love it." – **Crystal Gayle – Legendary Artist and Owner of Audio 51 Music, Nashville, TN**

"I can confidently say that getting the **PFM™ HD Monitors** is the best decision we've ever made for our studio! It allows our mixes to translate so well to other speakers that for the first time I no longer need to check my mixes in the car. Also, they are extremely smooth on the ears. I can spend 10+ hours in a day mixing on them without any ear fatigue. I couldn't be happier with how everything turned out." – **Chris Gatzimos – Engineer/Producer at Audio 51 Music, Nashville, TN**

"My **CTD PhantomFocus MixRoom™** with the new **PFM™ HD Monitors** has eliminated my need to regularly check mixes on other systems or in different environments. My current mixes translate like they never did in my last room and the change was almost overnight" – **Danny Ozment – Engineer/Producer/Educator/Podcaster and owner of Emerald City Productions, Franklin, TN**



"The **Phantom Focus™ PFM HD-1000 Monitors** have allowed our students to hear a clear and accurate representation of their projects and course work. When students turn in final projects it's obvious who has been working in the **PhantomFocus MixRoom™** and who has not. No longer am I receiving mixes with too much bass, over/under compensated highs, or muddy midrange. It is important for students to develop their ears, and having the transparent and accurate monitoring that the **PFM HD-1000 Monitors** provide, has been a crucial component of this development." – **Dr. Doug Bielmeier, Assistant Professor of Music and Arts Technology at IUPUI School of Engineering & Technology, Indianapolis, IN**

"The Carl Tatz **PhantomFocus MixRoom™** in the C.L.E.A.R. Lab quickly succeeded in establishing an environment that fosters excellence and innovation as well as nurture student creativity. Students have told me that having class in the C.L.E.A.R. Lab is the highlight of their week." – **Dr. Debra Burns, Department Chair of Music and Arts Technology at IUPUI, Indianapolis, IN**



PFM HD & UHD-1000 MONITOR TESTIMONIALS - continued

"Having had a **PhantomFocus System** for years now, I didn't think it was possible to hear more depth, more transparency, more clarity in a monitor... until I heard the **PFM UHD-1000s**. Suddenly I could hear nuances I couldn't hear on my old monitors. You can't imagine what a powerful tool this is when recording and especially mixing. The imaging is astounding rendering them to be engaging and inspiring. They make my work so much faster and easier."

– **Sean Spence – Engineer/Producer, Owner The Blue Grotto, Nashville, TN**

"7 years ago we installed a PhantomFocus System 4 in our studio. Even though we loved the warmth, accuracy, and "organic" quality of our PFS 4 system with our existing monitors, the new PhantomFocus PFM UHD-1000 Monitor System has provided us with an additional unmasked and heightened accuracy, often enabling us to pick apart and hear errors sonically masked in recordings previously thought to be flawless." – **Glenn Martucci – CEO Go Media, Olympia, WA**



Glenn Martucci – GO Media



Sean Spence – The Blue Grotto

"After being on Tannoy SGM-10's for 20+ years, I decided to make the jump to a Carl Tatz Phantom Focus System a few years ago, and I couldn't have been more pleased! However, recently I upgraded to the new PhantomFocus PFM UHD-1000 Monitors and the clarity of sound and the imaging in the stereo field are unlike anything I have ever experienced. I can trust that what I am hearing will translate to any other system, car or headphone. My confidence on the balance and the blend of the music is better than it's ever been.

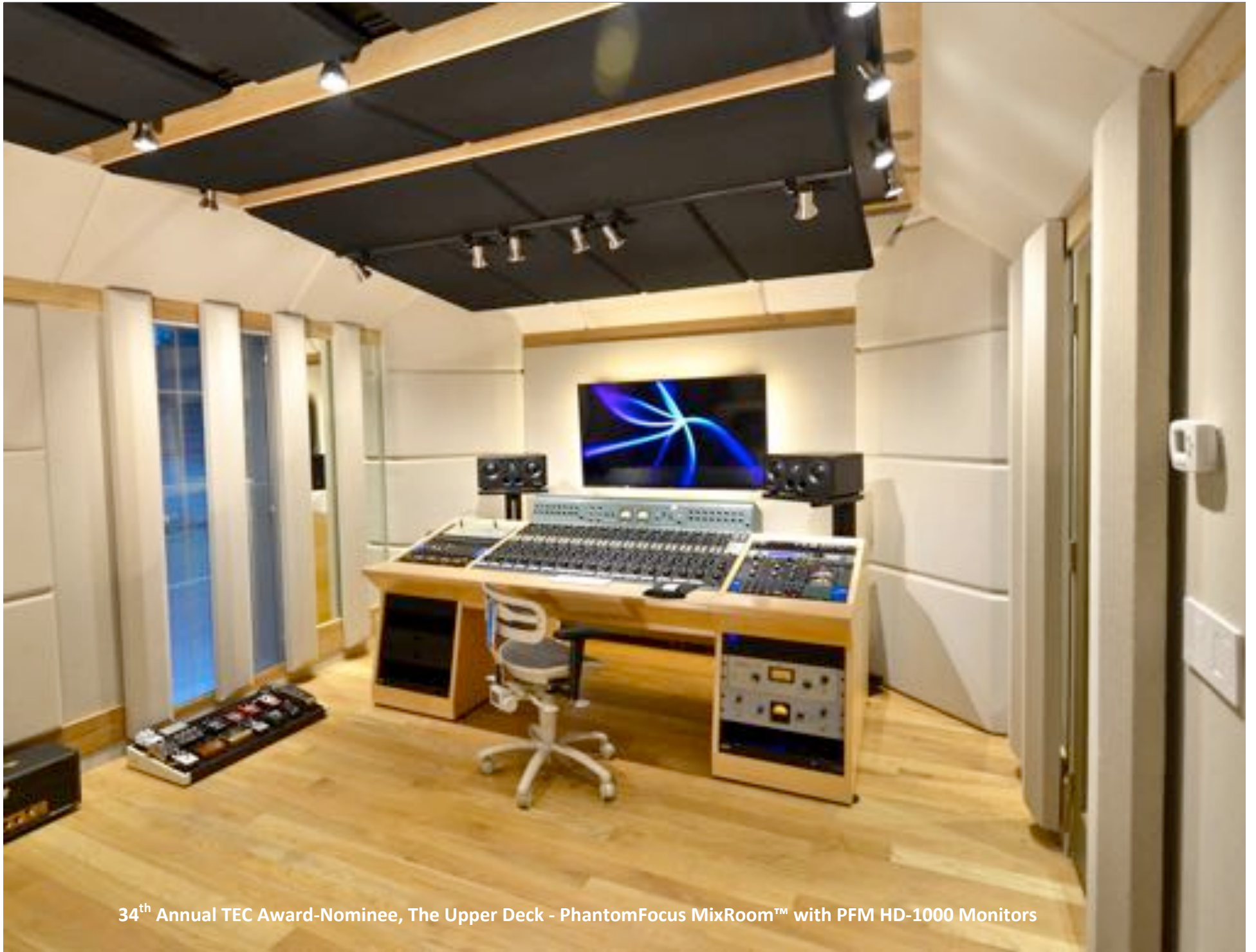
As part of my upgrade, I got the PF eChair, as well. My lower back has never felt better! Long days in the studio don't feel like long days in the studio when I'm in the Phantom Focus eChair. Stop by and give it a listen - I'd love for others to experience what I'm experiencing." – **Doug Sarrett – Multi-Award-Winning Engineer and owner of Uno Mas Studio, Nashville, TN**



UHD-1000s-O" Connor Mix Room



Doug Sarrett – Uno Mas - Nashville



34th Annual TEC Award-Nominee, The Upper Deck - PhantomFocus MixRoom™ with PFM HD-1000 Monitors



Award-winning The Grip,
Nashville, TN

PhantomFocus System



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