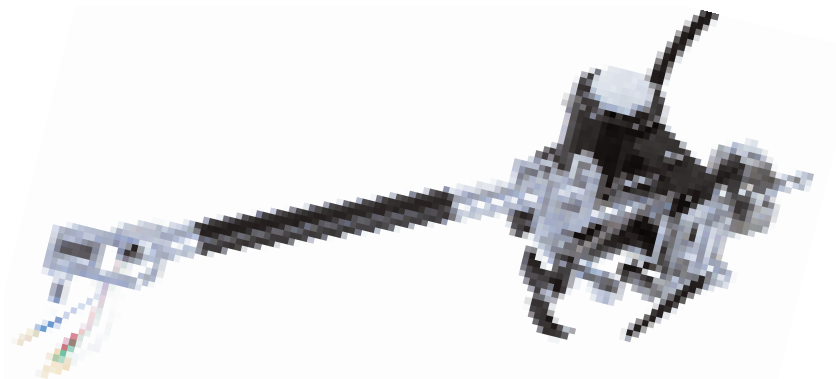


Tri-Planar Mk VII Precision Tonearm, Clearaudio Solution and Master Solution Turntables, and Redpoint Audio Design Model B Turntable

Wayne Garcia

Great analog is like a drug—a handful of goodies to tempt the habit.



Tri-Planar VII

Already the winner of two TAS Golden Ear Awards (by HP in 2003 and me in 2004), the latest version of the Tri-Planar tonearm is long overdue for more formal recognition in these pages.

A classic of analog design, the Tri-Planar was the brainchild of a rather eccentric watchmaker and amateur big-band trumpeter named Herb Papier, who was also an expert calibrator of chronometers for the U.S. Navy. Back in 1967, Papier started tinkering with a tonearm project he hoped would solve the three major challenges he saw facing arm design: adjustable azimuth, adjustable VTA (vertical tracking angle), and a bearing that would sit at the same plane as the record. Over the

next many years, Papier built pre-production units for friends, and at the 1981 Consumer Electronics Show debuted what was then called the Wheaton Decoupled Arm. Papier renamed the arm Tri-Planar to more accurately reflect his work with the three planes of tonearm geometry, and continued to refine his concepts. (As early Tri-Planar owners can attest, there were sometimes fuzzy lines between different iterations of the arm, though Papier would gladly upgrade older versions for a reasonable price.)

In 1994, a 23-year-old audiophile named Tri Mai was teaching art at a Minneapolis college while dreaming of purchasing his own Tri-Planar. (Mai, who is half French, escaped Vietnam at age nine with 25 other “Boat People.” Eighteen survived the journey.) After obtaining his dream arm, Mai began phoning Papier with questions about

the finer points of setup and design. The men started a correspondence, and in 1998 Papier invited Mai to visit him at his home in Maryland. Mai stayed a week, sitting at Papier’s side, watching (and occasionally helping) him assemble a few of the handmade Tri-Planars.

By 1998, Papier’s health and hand-arm dexterity were weakening, making it difficult to execute his work with the precision required. He again invited Mai to visit—this time for a three-month stretch. It was at some point during this trip that Papier invited Mai to carry on his legacy. It took another six-month visit to work out the details of the transfer, during which Papier taught his protégé everything about the Tri-Planar (then in a Mk VI incarnation), ensuring that Mai could build the tonearm to his exacting standards. After acquiring Tri-Planar, Mai moved the operation to Minneapolis.

“I’m privileged that he picked me,” Mai told me. “Several companies were bidding on the arm for its prestige and reputation, but they weren’t interested in carrying on the integrity of the design. I was, but I also think Herb chose me because I was younger and wouldn’t mess with it,” he added with a laugh.

Papier died in 2003, at age 83, just about the time that Mai—then in his third year of production—introduced the Tri-Planar Mk VII, which includes many of its inventor’s last thoughts on

the tonearm. (A stipulation in their contract put a seven-year freeze on the design, after which Mai may incorporate his own ideas.)

I've now lived with the Mk VII for close to two years, with the Clearaudio and Redpoint turntables discussed below, as well as two cartridges—the Cardas Myrtle Heart and Shelter 90X (both of which will appear in a future column). Naturally, different platforms and cartridges will yield different overall results, but several identifiable characteristics of the Tri-Planar remain constants.

Where earlier editions of this arm were known for delivering great solidity, focus, and superior staging, they were tonally on the dark, lush side of the sonic spectrum, and added a velvety romance to the sound. Grant you, I have nothing against romance, and would take a beautified sound over a sterile one every time. What's special about the Tri-Planar Mk VII is that it retains the signature weight

Tri-Planar Build & Setup

Each of the 140 separate pieces that makes up the Tri-Planar is tested before assembly. The arm's features include an annealed-aluminum coaxial damped arm tube (annealing is the process of heating and slow cooling that increases strength), a damped headshell, a clamping yoke design that firmly couples the headshell tube to the bearing tube (making for a single unit that still allows for azimuth rotation at the headshell), hard-polished needle and cone bearings that are individually adjusted in each arm (making it as friction-free as unipivot, according to Mai), VTA that can be adjusted during play, a progressive anti-skate design, decoupled counterweights that allow proper stylus force for any cartridge without altering effective mass, and a silicone damping trough.

The Tri-Planar is easy to mount via three screws at the base—no other plinth or arm platform drilling is required. And though setup is not unusually difficult, the instructions need updating (more detailed text and photos would be a great help), and I would never recommend self-setup to the analog novice. There is simply too much fine-tuning required if you're to realize this arm's full potential. **WG**

and focus of past designs, has even better holography, detail, dynamic range and nuance, and yet it also brings along a much greater sense of tonal neutrality. Simply put, like the best of today's components, the Tri-Planar gives the impression that there is less electro-mechanical stuff between you and the music. With this arm, full-bodied instruments, such as Janos Starker's cello in the Bach Suites [Speakers Corner/Mercury] and Roy Haynes' drums in Analogue Productions' stunningly good 45rpm pressing of Thelonious Monk's *Thelonious in Action*, have the dimensional body, power, and gravity to suggest a fine facsimile of the real things. The sound of Haynes' drums on the Monk record is especially lifelike, while, say, Milstein's Stradivarius in a Bach Partita [DG] or the delicately struck triangle, caressed hollow-body electric guitar, and breathy aspects of Ella Fitzgerald's voice in "Good Morning Heartache" [*Clap Hands, Here Comes Charlie!*, Verve]

retain their natural delicacy and lightness, and yet have a strong physical presence. Never before in my experience has a reproduced triangle sounded at once so percussive yet whisper-soft.

In addition to bringing home the natural relative proportions of instruments' physical scale and dynamic contrast, the Tri-Planar Mk VII is a master of soundstaging and imaging within. Where many audio components tend to sheer off the outer edges of the soundstage, and increasingly so as depth recedes, the Tri-Planar does not. Instead, and this is of course dependent on the record and associated gear, it seems to open up the farthest reaches of the stage, as if illuminating previously dark corners. Within that space, voices and instruments "materialize" with particular vividness and tangibility. This can be heard on any number of LPs, but two that immediately spring to mind are Classic Records' 45rpm single-sided pressing of the *Royal Ballet*, and Wilco's *a ghost is born* [Nonesuch/Rhino], where

each allowed the already superb and transparent Kharma 3.2 speakers to display a heady level of sonic "invisibility."

At \$3900, the Tri-Planar continues to sit among a small handful of today's top-tier pickup arms, and it's one with quite a long track record, too. Under Mai's stewardship, that should continue for years to come. Mai's final words to me were, "Our advice to owners of the arm is to enjoy it for ten years before thinking about any upgrades."

Clearaudio Solution and Master Solution

Records are becoming iconic, almost like electric guitars, reflecting a certain point in history," Musical Surroundings' Garth Leerer mused the other day, adding, "One of the cooler aspects of Clearaudio's Solution Series is its upgradeability. Another is the ability to



mount three arms. As more arms and cartridges become available, including mono cartridges, the serious record collector and hobbyist has more options.”

Occupying the middle ground in Clearaudio’s range of acrylic-centric turntables, the Solution Series is available in three different incarnations—the Solution (\$2000), Master Solution AMG (\$5000), and Maximum Solution (\$10,000). While each shares the same three-point star-shaped plinth, three-arm capability, a bronze-plated inverted bearing of hardened steel, and belt-driven outboard motor, the Solution uses a 30mm platter, while the Master and Maximum feature 70mm platters and the company’s 12mm “reference” ceramic bearing. Moreover, the Maximum is a three-motor unit with a second three-pointed plinth that properly stations each motor for precise belt tension, and the design includes the outboard APG (Accurate Power Generator), which also allows fine-tuning of each speed. The Solution and Master

Solution are field-upgradeable: Solution to Master costs \$3000; Solution to Maximum is \$11,000, and Master to Maximum is \$7500.

I lived with a Solution for a few months before Leerer sent me the Master Solution AMG upgrade kit. This includes the 70mm platter and matching bearing, aluminum/magnesium (AMG) skins for the acrylic plinth, and three large stainless-steel pods for mass coupling and mounting/raising of armboards to appropriate heights vis-à-vis the platter. About the kit, Leerer noted, “Regarding the pricing, we decided to offer the Solution without the AMG skins to make this a very affordable three-arm ‘table. The skins come with the Master or with the upgrade kit, as we are positioning this as the best bang for the buck in the line. The AMG skins are important for both adding rigidity and damping to the acrylic plinth, but I believe more so when the heavier platter/bearing is added, i.e., in the Master

Solution, Maximum Solution, and Master Reference models.” (I’ve not heard the Maximum, but Editor-in-Chief Robert Harley uses one in his reference system.)

Though I have yet to take advantage of the multi-arm capability (I used the Tri-Planar only), I did experiment with two optional accessories—the outboard Synchro Speed Controller (\$1000) and the Outer Limit (\$900), a hefty stainless ring that serves to heighten the platter’s flywheel effect (aiding speed stability), dampen records, and double as a warp flattening device.

The essential sound of these Clearaudio models is, well, clear, with a fine sense of quickness and transient speed. “The concept is to take away from the products what you don’t need, i.e., a huge base,” Leerer said. “By removing the large plinth you improve clarity, and by spreading out the feet the tripod effect brings greater speed and clarity.”

After months of using these models I found great similarity in their sounds

(though once I hit the Master level, I never went back). The Solution is nimble and clean of presentation, and the sound is light and open with a nice sense of overall balance and detail. But because it isn't the most full-bodied sounding 'table out there, Starker's cello, the Royal Opera House Orchestra, and the Monk and Wilco records don't have the weight, power, or dynamic force they do when you jump to the Master Solution (and I assume the Maximum delivers more of same).

The Master is certainly worth the extra money; it's nice that it can be done in stages if you want to lessen the initial financial sting. In tandem with the Tri-Planar (which is not a likely real-world pairing with the Solution), the Master "allowed" the arm to get more from the grooves, seemingly digging deeper for major improvements in all areas. Now, Starker's cello danced, but with the characteristic sinew and glowing wood tones for which the recording is justly famous. The *Royal Ballet* blossomed in all dimensions, growing wider and deeper, with a greater sense of air and space around and between individual instruments, and greater micro- and macro-dynamic contrasts, while the Wilco and Monk records also displayed greater presence, punch, and were more musically commanding.

If you get to the Master level, I would strongly recommend checking out the two accessories. The Speed Controller may or may not make a big difference, depending on your AC quality

(plus, the Master has a six-level pulley that allows for fine-tuning of the speeds), and though the Outer Limit can be awkward to use, it has a rather surprising effect, lowering the perceived noise level while improving the sense of air, detail, and dynamics.

Redpoint Audio Design Model B

If you go to Redpoint Audio's Web site, you'll see a retro-looking black-and-white photograph of a cigarette-smoking, fedora-wearing gent—tie loosened, sleeves rolled up—who appears to be a deejay. In addition to an ashtray of butts and a crumpled cigarette pack, his desk holds a microphone and a massive three-piece turntable. The man is Peter Clark, chief designer and, well, chief everything at Redpoint Audio, a fledgling company out of Scottsdale, Arizona.¹

I spotted Redpoint at its first CES in 2004, and then again at this year's show. You can't mistake these designs for any other. Depending on the model and finish, they're at once massive and elegant looking. Unlike the Clearaudio approach, the platter and bearing rest on an immense base, and this base/platter assembly sits in isolation from likewise imposing separate motor and arm pods. Oh, and rather than the standard rubber or poly drive belt, Redpoint uses Mylar tape—either the clear leader or the actual tape itself. (This is something of a mixed blessing, as I will soon describe.) Tri-Planar's Tri Mai is high on these designs, and put me in touch with Clark to arrange an audition; to say that my experience with his Model B turntable has been exhilarating would be an understatement.

Redpoint makes three models: the \$8800 Model A, the \$11,000 Model B, and the \$16,000 Model D. (A Model C was designed but deemed too costly to manufacture.) With each progression, the name of the game is mass, mass, and more mass—or put another way, damping, damping, and more damping. "It's massive *and* suspensionless," Clark remarked in his rich North Carolina drawl, "with lots of damping, and *lots* of Teflon."

Each Redpoint turntable starts out as a set of solid aluminum billet chunks that undergo a beastly-expensive machining process to achieve the final result. The base begins as a 3" piece and is cut to 2.7". The platter is machined to resemble an unusually thick-walled pie pan. The sloping walls vary from a half-inch to one-inch thick from top to bottom, with a two-inch-thick white Teflon platter² resting inside. On the 110-pound Model A, the platter assembly is filled with #6 skeet shot and the same Marvel Air Tool oil used to lubricate the main bearing. On the 120-pound Model B, the platter and base, which sports 18 machined damping holes, are filled with the same shot and silicone oil. And on the 130-pound Model D the same shot and silicone damping materials are used in the platter and base, as well as the arm and motor pods. In addition, the Model D uses a rare and expensive black Teflon platter, which Clark tells me—and I have no reason to doubt him—is sonically superior to the white. The platter is driven by a 12V DC motor with precious metal brushes and sleeve

bearings, and is powered by a sealed lead-acid battery. According to Clark, the 12V charger (not a wall-wart) keeps things spinning for a full 168 hours (one week), and the battery power keeps AC line ripples out of the system. (I could detect no sonic difference with the charger plugged in or not, so I kept it plugged in all the time, which actually prolongs the battery's life.) Literally topping off Clark's mass/damping theory, the Redpoint comes with a five-and-half-pound machined record weight that will—I kid you not because I found out the hard way—seriously hurt anything it might accidentally fall on.

I'm not going to get into any mass versus low-mass debates, or discuss sprung suspensions versus fixed bases, vacuum record hold down, or the poten-

tial benefits of air-bearings. What I will say is that the Redpoint Model B is the best-sounding turntable I've ever used in my system—and by a long shot. And though there are worthy contenders I've not evaluated, the only design that has affected me—musically—like the Redpoint is Lloyd Walker's even more massive (350 lbs.) and more costly (\$30,000) Proscenium Gold turntable and arm.

Like the Tri-Planar Mk VII, with which it makes a stunning combination, the Redpoint announces itself as special right from the start. Indeed, the Tri-Planar and Redpoint share many of the same sonic attributes—a very low noise floor that creates a spectacular sense of space and dimensionality, a feeling of near-limitless dynamic power (with this

'table, the Kharma speakers' 40Hz-ish low-frequency response seems to extend another octave), remarkable degrees of detail (not for detail's sake but simply as a part of the musical fabric that had previously been obscured), and terrific top-to-bottom balance, combined with, when asked to, a feather-light delicacy. One moment, Roy Haynes' drum solo during "Blue Monk" [*Thelonious in Action*] will explode from the rear of the soundstage with the startling snap and near-force of a real kit. Switching to Ella's *Clap Hands* and "Good Morning Heartache," with its delicately struck triangle, will leave you marveling at how percussive yet ethereal this instrument—one of the hardest for our systems to get to sound right—can be.

Citing more specific musical exam-

1 Redpoint's evolution grew from a group of Internet enthusiasts interested in pushing the turntable-design envelope to three branches of the same tree: Teres, Galibier, and Redpoint. While Teres designs are quite different and employ various combinations of wood, acrylic, lead, and brass, Galibier's retain some similarity to Redpoint's, which have arguably taken the initial idea of serious mass and damping to its most extreme incarnation.

2 Earlier versions of the design used PVC platters but Clark found the costlier Teflon, which weighs two-and-half times as much as PVC, to be the more effective material. The platter is locked in place with 59 countersunk hex screws.




ples would be easy but potentially endless, as each record I spun on the Redpoint—from old transfers of 78s (Robert Johnson’s *King of the Delta Blues Singers* [Columbia]) to early mono LPs (Sinatra’s *The Voice* [Columbia])—delivered a pretty mind-bending experience, the kind that leaves you feeling as if you’re hearing old favorites anew, the kind that makes you feel as if you have a whole new record collection to explore.

Do be advised that Redpoint’s ’tables (currently at least) are not for those who object to some fussing about. The fussing, which is related to the Mylar belts I mentioned earlier, is not major—the ’table itself is a model of simple setup—but it can be aggravating. Though the magnetic-tape belts (they’re actually recycled VHS tapes) are thinner and provide a readily heard improvement over the clear leader mate-

rial belts, look at them the wrong way and they’ll easily crinkle and crunch. (Fortunately, they’re cheap, and Clark supplies a healthy backup with purchase.) This may happen at initial setup, while getting the belts to “ride” properly on the motor spindle and platter, or later if you accidentally move the motor pod while dusting. If either of these things occurs (belt change or pod shift), the speed requires a readjustment (knobs for 33.3 and 45rpm protrude from the top of the motor pod). Like I said, not a biggie for me. Pod-shift happened roughly once every two to four weeks, while belt crunch, once I got the hang of it, was pretty rare. But some of us prefer no fuss at all. (At press time, Clark was sourcing a new thin but less delicate Mylar.)

Great analog is like a drug. The better our playback components get, the

more deeply rewarding the musical experience is, and the more of it we want. Despite some minor quirks that I believe Clark is in the process of ironing out, the Redpoint/Tri-Planar combo has turned a regular but semi-under-control vinyl user into a serious analog junkie. 

ASSOCIATED EQUIPMENT

Artemis Labs LA-1 line and PL-1 phono preamps; BAT VK-31SE preamp, VK-55, and VK-250 amplifiers; Manley Steelhead phono preamp; Sutherland “The Director” linestage and Ph.D. phonostage; Joule Electra VZN-80 amplifier; Kharma Ceramique 3.2 speakers; Nordost Valkyrja interconnect and speaker cables, Brahma AC cords, and Thor power treatment; Finite Elemente “Spider” equipment racks; ASC Tube Traps

MANUFACTURER AND DISTRIBUTOR INFORMATION

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