



We talk with *Mercury's* Sergio Hamernik to dig deeper into their roots, find out what one can expect from *upgrading* their *iron*, and what sets *Mercury* apart.

by Steve Ouimette

It doesn't take too much digging to find a laundry list of boutique amp builders using *Mercury Magnetics* transformers in their products. From *Mojave Ampworks* to *Joe Morgan Amps* to kits from *MetroAmp*, builders have found that *Mercury* knows their *iron*. While *transformers* rarely receive the same level of attention of NOS tubes, speakers, or even guitar cables, they are a major contributor to *tone*. Think

about it—the *power* and *output* transformers are the start and end of the line with any amp.

Based in Chatsworth, California, *Mercury Magnetics* has been building *transformers* for close to 60 years. I recently had a chance to talk with *Mercury's* Sergio Hamernik to dig deeper into their roots, find out what one can expect from *upgrading*

their *iron*, and what sets *Mercury* apart. Prior to our conversation, I had the opportunity to witness the remarkable transformation of an *Epiphone Valve Junior* modified from stock to hot-rodged, using one of their *transformer upgrade kits*. Not only was it a noticeable *upgrade*, it was a revelation in just how important the role of quality *iron* in an amp is. But because it is the single most expensive part of any amp, it's no wonder we see so many modern amp manufacturers skimp on the *iron* to keep costs down. Let's see what the passionate, and often hilarious, Sergio has to say about his part of the business.

PG: I've been seeing *Mercury* transformers in amps for at least a decade. When did you get into the amp scene?

SH: This happens to be one of our most often asked questions. Even though *Mercury Magnetics'* roots go all the way back to the early 1950s, there are guitar players who are only now discovering us. But if an industry insider like you has been aware of us for at least a decade, then I suppose it means I don't need to lay off any of our sales and marketing staff.

I would attribute most of our lingering anonymity to the old days. Back then, most of our clients from the audio community preferred to keep us as a trade secret from their competitors and the press. The typical *transformer-savvy* amp builder also didn't usually want to share the credit with us, or reveal what their "unique" technical advantage was regarding audio and *tone*. Consequently, we were asked to maintain a low profile and generic look for our *transformers* for quite some time. On occasion, a customer in the know will spot a small "*MM*" mark on a *transformer* from an older piece



of gear, and ask if it's a **Mercury**. Odds are that it is.

It was the guitar amp crowd that pushed us to go above ground. Now **Mercury** gives any electric guitar player or amp restorer a taste of what the pros were using, talking about in their studios, and amongst themselves. Many players have told us their amps increased in value when upgraded with **Mercury transformers**, and this became evident when insurance appraisers began to contact us for verification. However, it wasn't until the mid-1980s when we began to market our services and various brands to guitar players.

For me personally, I got into the amp scene around the mid- to late 1970s. I just found it to be a nice way to relax from the strain of oversleeping.

PG: Your website shows a large number of amp manufacturers you have replacement/upgraded transformers for. What are your best sellers and why?

SH: There are so many different camps loyal to their particular amp brand, so it would be difficult to single out the best sellers. The best sellers are transitory and change from week to week because guitar amp players are a fickle bunch. That's why we've built the world's largest catalog of guitar amp *transformers* where nobody is left out.

But trends tend to follow their own dynamics. And the current worldwide trend seems toward smaller wattage amps—regardless of brand. Conversely, the 100-watt heads are not selling like they used to. Players are gigging with no more than 15 watts and a few pedals. Regardless of playing style, they're doing just fine abiding by sound level restrictions and kicking ass with the **tone** we feel **Mercury upgraded** amps deliver.

These players really get the fact that an amp lacking in **tone** can't be fixed with higher power or covered up with a gain mod. An amp that coughs out an asthmatic **tone** at 50 or 100 watts easily fatigues both music listeners and guitarists. But the audience will stay until the bar closes if the band plays well and sounds great—even with as little as a few watts going through the available PA system.

PG: What can a guitarist expect to hear when upgrading their transformers in a newer amp?

SH: An amp's *transformers* are the most important

component in determining the quality of amplified guitar **tone**. And it's no coincidence that they're the most expensive parts in an amplifier. Many of the newer amps just don't have the same "overkill" factor with their *transformers* as the amps in the '50s and '60s. Why? Ignorance and a bean-counter mentality. What's good for accounting isn't necessarily good for **tone** from an amp. Sadly, the people making these decisions are probably not players themselves and don't seem to realize the damage they're doing to the industry.

It's not unusual to find a current production amp with a *power transformer* running hotter than hell, even without cranking the amp all the way. Or having an undersized, cheaply built *output transformer* whose sphincter begins to tighten the moment the guitarist reaches for the amp's volume knob. An amp built around anemic *transformers* yields only to dull, thin, noisy, fuzzy mids and mushy bass. That's what makes your notes sound more like farts through a pillow. This overkill factor is probably the only edge that some of the vintage amps have over the newer amps.

We have made it our mission to duplicate the performance of the best original transformer designs of all time. In terms of amplified guitar tone history, these transformers represent the best ever produced.

—Sergio Hamernik

Have you ever noticed how most newer amps often weigh less, sometimes a lot less, than the older ones? That's usually the weight difference between the old and new *transformer* designs. There is a direct relationship between weight and having *transformers* that seem to stay cooler and "loaf around" with power to spare, until a player demands more from their amp. It's like they are waiting around having a card game, waiting for the player to do something. The best vintage **tone** was born that way. Newer amp **tone** can be easily improved—if the builder follows some of the same ideas.

Upgrading with quality *transformers* gives a second chance to a new amp owner to make things right with their **tone**, by reclaiming that overkill factor. Assuming there are no issues with the amp's circuitry like bad

parts or worn out tubes, a guitarist should hear and feel improvements with the very first pluck of the guitar. They should expect to hear the notes more detailed with overtones, and a quicker and more immediate response to their playing. Clean notes will have less sonic collisions with noise and reveal more bell tones, chimes, *etc.*

When more distortion is required, the player will sense better control of crunch and when break-up begins to happen. The coughing and hacking that happens when a stock amp is pushed, will vanish with a *transformer upgrade*. It will be replaced with longer sustains and notes that reach farther. The amp will also sound closer and bigger than the power it puts out—and the bass notes will have a tighter, rounder bottom end. And when pushed, she will still be able to hold that quarter from dropping—no matter how tall her high heels—something most musicians are looking for.

It's not uncommon for guitarists to report that it took a few weeks of playing to fully realize what they've gained in terms of harmonic richness. These players have typically played longer and felt more inspirational emotions sucking them in, as they have invested more time into relearning and becoming reacquainted with their amps.

PG: Many players become very attached to the transformers in their vintage amps. When you create *ToneClones* or *Radiospares* and *Partridge* versions of these classic transformers, how close are they get to the originals?

SH: *Radiospares* and *Partridge* are our brand specific clones, whereas ***ToneClones*** are "best-of-breed" duplicates culled from the hundreds of other brands that have made *transformers* over the years.

We have made it our mission to duplicate the performance of the best original *transformer* designs of all time. In terms of amplified guitar **tone** history, these *transformers* represent the best ever produced. In the grand scheme of **tone** pursuit, these designs are incredibly important and deserve to be considered treasures.

This is an ongoing project for us, spanning almost three decades now. And it couldn't have been accomplished without the enormous amount of assistance we've received from top players and amp collectors around the world.

What about **Axiom** transformers? Where do they fit in?

The **Axiom** transformer line takes over where the limitations of vintage transformer design ended. No bean counters here—simply the sincere pursuit of answering the age-old question: What if there were no constraints on budget, time, or material quality to achieve the best possible performance? That's our objective with the **Axiom** line.

Axiom transformer designs represent many new approaches—new **tone** with the best materials and designs money can buy, so they're not intended for the timid or the low-budget crowd. Check out our **FatStacks** and **SuperStacks** for the **Marshall DSL** and **TSL** families for interesting comparisons.

PG: **Mercury's** vintage transformer restoration service has been gaining a reputation for quality work. Why would someone want to restore a transformer instead of replacing it? And vice-versa?

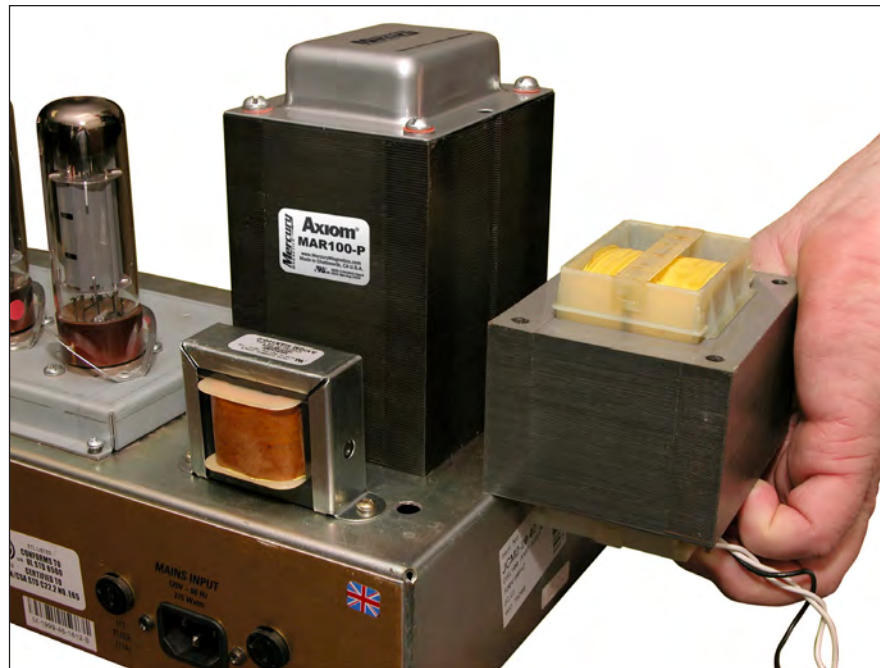
SH: Some vintage amp owners prefer to pay the extra cost of our restoration services, because it's very important to them that their amps retain authenticity. Collectables or rarities are valuable. They're of the "why take chances" mind. The high road. But on the flip side, we have pro musicians who insist on touring with their vintage gear. To play it safe, and not sacrifice the **tone** of their original transformers, they have their techs replace the stock transformers with

Mercurys. By doing this, they preserve the original transformers from road abuse while taking advantage of our reputation for **tone**, durability, and warranty. Restoration of vintage transformers is a tricky and highly specialized art. Sadly, too many of the great originals have been lost forever due to technically inept and musically disinterested people. We see attempts at "rewinds" here all the time.

Occasionally, it appears some people confuse "demolition" with "restoration," and the preservation of the original **tone** is lost forever. There's no shortcut to doing a proper restoration.

PG: I understand you're doing all of your labor and get all of your materials in the USA. How does that impact your business aside from just the straight costs?

SH: Well, we figured that someone has to do it—and we really do make everything here with 100 percent American materials. There are plenty of products out there stamped with "Made in the USA," but are actually assembled with non-USA, low-price materials. But



Mercury's Axiom MAR100-P transformer compared to the original Marshall iron.

yeah, we're the real deal and proud of it.

Building transformers that make an amp sound good requires highly specialized technologies, highly skilled labor, and the right kind of materials. We love music and owe it to the players out there to do all the work "in-house," so we can keep tight control over every aspect of our transformer designs. It's really old-school military spec style, so our transformers don't vary at all from batch to batch. If you need a replacement transformer 10 years from now, it'll sound exactly the same as the one it's replacing.

We're hard-liners when it comes to not playing shell

games with a musician's hard earned dough and quest for better **tone**. Perhaps I'm a fool for doing it this way, but I was brought up in a musically minded family. From a very early age, I was taught that music is as important and necessary as food. If there is a day our services are no longer needed or appreciated, I'll pursue my dream of owning a car wash in the valley, and get into the business of making money.

PG: Any new or exciting projects in the works at **Mercury**?

SH: Yes, but we're planning on releasing the news sometime around summer. For quite some time, we've been fielding requests for accessories to accompany our transformer line. We're being asked to apply our know-how to other aspects of guitar amps.

PG: Do you have any advice for guitar players and techs in their quest for **tone**?

SH: Don't let anybody fool you—every player has the ability to discern the difference between good or bad **tone**. Unfortunately, there are a few too many self-styled "experts" who irresponsibly dispense advice without having a clue. As a result, we've all seen amps completely lose their **tone** by being modded to death.

There's no excuse for the old "damn, I've done it this way for many years so it must be right" mentality. More than ever, it's so easy to seek opinion, advice, and help online and elsewhere. I highly recommend the old textbooks from the 1950s and 1960s as a good place to start on vacuum tube audio circuits.

Do your homework and follow what the smart players are doing—improving your **tone** isn't that elusive. If what you have sounds good to you, leave it alone. But if you know your amp's **tone** could use some improvement, then start where it begins... the transformers. **PG**



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