

# AMERICAN TINKERER

## Bob Palmieri and a lifelong pursuit of sound

BY DAVID ROYEK, FRETBOARD JOURNAL #53

**BOB PALMIERI of Duneland Labs is talking tone, and it's a good idea to listen.**

*"The tone with the switch in the middle position on a Telecaster is equal parts chalky and pearly."*

His unusual descriptions are a pleasure to hear:

*"On a Strat, when the switch is over here between the middle and the bridge, that always sounds like a bucktoothed grin to me."*

Palmieri's ears have developed over decades as a guitarist, educator and inventor of pickups and other sonic devices. His achievements in these endeavors are on an unusually high level, but I wouldn't expect you to solely accept my word on that. There are others who feel the same.

Nels Cline calls him a wizard. Bill Frisell calls Palmieri a monster guitar player with serious ears. Ken Parker, who has known and worked with Palmieri since the 1980s, sums him up this way: "The guy, he is so good at so many things, it's just kind of a wonder. He's a fantastic musician. He gets music to a depth that very few people operate on. He can express himself in a huge variety of ways musically. He makes pickups that smart people really love. And then all this other stuff. He's a brilliant nature photographer. He designs and builds his own tube amps. He's an amazing guy – it's a pleasure to know him. And a fun dude with a great sense of humor."

### CLEAN SHEET OF PAPER

Palmieri says that abstract sound descriptions are very helpful to him – they help him focus on his mission. Aside from being the primary jazz guitar instructor at DePaul



University's School of Music in Chicago, a position that he has held for 30+ years, Bob is driven to build the best guitar pickups that he can imagine. Duneland Labs, which is named after Bob's Indiana workspace along the sandy shores of Lake Michigan, was founded in 2016 to make Palmieri's creations more widely available.

Palmieri explains his design philosophy: "I took my cue for how to approach pickup design from a Japanese lens company (Cosina

Voigtländer) whose devices I tend to really admire," he says. "When Mr. Hirofumi Kobayashi was asked how they design such great products, he said something along these lines: 'The first thing we do is start with a clean sheet of paper, and we make the best possible lens that we can make with no considerations for size, price, practicality or how hard it is to make consistently to these tolerances – all of the things that serious manufacturers consider. Then we have that as a benchmark, and we can figure out how close we can get

and what tradeoffs are worth it. So that's what I did. I decided that if I was going to approach the pickup thing very seriously, that's how I was going to do it. I started with that clean sheet of paper and said I don't want to be thinking about making Strat pickups or P-90s.

I just want to think about what's the best possible magnetic pickup, that needs no assistance from outboard electronics, no preamps or anything, that could possibly be built. So I evolved this device that I call the Mobius, which is the subject of my first utility patent. Like all pickups, it's a translation device for the player's intention. It's got this big hairy current transformer hanging off the end of it. Form factor was not something that I considered. When I was done with that particular design, it really did everything that I wanted in terms of response, low noise and output. So I thought, 'Okay, I have this as a model. What's the next thing I should do?'

Since guitar players tend to be somewhat resistant to change, what he did next was to make his design more recognizable as a pickup. Palmieri continues, "I figured I had my way, I was able to build what I thought was the best thing in the world, but it's not very practical. So let's build something people can use. I decided to start with the humbucker form – something that fits into the humbucker box."

The result was the Blackpole. Initially limited to a series of 42 humbucker-sized pickups, now available in short production runs from Duneland Labs, the Blackpole 42s are as striking visually as they are sonically. The exterior of the metal housing was worked on by jewelers and knife makers. Palmieri describes the internal workings: "The neck pickup and bridge pickup are radically different from each other and anything else that I can find on the market, and they differ from other things on the market in terms of magnetic architecture. Because I was starting to think, 'Everybody is putting more or less winds of thinner



**Consummate inventor Bob Palmieri plays a Ken Parker archtop equipped with his Bronzeville pickup.**

or thicker wire with this insulation or that insulation, they're scattering, they're not scattering... all this kind of stuff. But there's something about the basic magnetic architecture of a pickup that really determines its character independent of how you pile the winds on or whatever. So magnetic architecture has been my focus. While your bridge bucker has got a magnet in it, mine has 17. All of the magnets doing these different jobs to make the way that the string hooks up with the coil behave in a certain way that I feel is satisfying. The difference is really something that has to be experienced because it's all about the response to the player."

The interaction between player and pickup is central to Palmieri's work. "All of the pickups that I design are based more around response than sound," he says. "Response was key to me as well as thinking about the point of the note and the pad of the note, in terms of what happens right on the

attack, and how does that blend into the pad that follows it, and what is the proportion and connection between those two? Because that is one of the things that bothered me about conventional humbuckers – right on the attack, there is something sort of weird and anomalous and clanky and not quite right. So my interest is in getting stuff out there into the hands of people who are then going to manipulate it somehow."

## TRANSISTOR RADIO

As a child, Palmieri loved music. His father played some piano, so young Bob started there. He also had another love: tinkering. "I always messed around with stuff," he remembers. "I used to take things apart when I was in fourth and fifth grade. Instead of punishing me, my parents just told me that I had to put those things back together and make them work. It was cars, bikes and radio stuff. I think my first real repair



was my little handheld transistor radio that I used to listen to broadcasts under my pillow. It had stopped working. I realized it had stopped working because one of the wires had broken off the 9-volt battery clip. I sort of figured out which wire it was, and I stripped it with my teeth and pinched it between these two snaps to make the connection. And the radio worked, and my parents thought I was a genius."

In the mid-1960s, Palmieri joined the American Boy choir, a prestigious touring choir based at a New Jersey boarding school. Not only did this experience continue his musical education, but it also got him on a tour bus for the first time and showed him the beauty of making music with others.

"The idea that I would be doing a lot more singing and a lot less piano playing seemed fine to me," he says. "It was also that band aspect – it wasn't just me; I was in a group of people. When you start realizing your sound is part of a much larger context of sound, that was really appealing to me."

This realization has remained with Palmieri far beyond his time in the choir. "A lot of guitar players like to play solo gigs, and I just run from those things," he states. "I find that when I'm playing solo guitar, I'm always looking around going, 'Where's the rest of the band?' I really like to be a part of something, and often I hardly know what to play until I'm in a context and then I hear the context and I go. 'Oh, okay, this is what's going to work right here.'"

Like many teenagers, Palmieri fell under the spell of the electric guitar. His first new guitar from a music store was obtained at age 14, and it was an outstanding first guitar: a 1969 Rosewood Fender Telecaster. So outstanding, in fact, Palmieri still owns it. However, it has not been immune to Palmieri's tweaking. "A couple times, I was tempted to sell it, but I've stepped on it so hard that I've mashed most of the value out of it," he says, laughing. "I did my first mods



Palmieri's first "good" guitar, a 1969 Fender Telecaster

on that Telecaster – reshaping the board radius, refretting, all kinds of stuff. I was really liking the Allman Brothers, but all I had was my Telecaster and I wanted a thicker sound. So I discovered that I could move the resonant frequency of the pickups just by putting a straight shunt cap between the pickups and ground. It had more focus and felt more like a humbucker."

After completing high school, Palmieri tried the 9-to-5 life but decided that it wasn't for him. "I got out of high school, and I really didn't want to go to college," he remembers. "I ended up working at a desk job for a year, and it seemed like kind of a

trap. It was very comfortable; I was still living with my parents. I just decided that I really wanted to shake it up, so I moved to Boston and played with a blues band for nine months. I ate half a tuna sub every other day and lost 25 pounds in a matter of a few months. I lived in a house with the guys and, of course, had the time of my life. The gear was always set up in the basement – that was what we were there to do."

After a year of playing the blues in Boston, Palmieri decided that college might not be a bad idea, so he enrolled at the University of Rochester as an acoustical engineering major. Now very serious

about guitar, Palmieri took lessons with Tom Rizzo (jazz guitarist and future Los Angeles session giant) and his staff at a local music store/teaching studio.

Palmieri took advantage of his location and began taking courses at the Eastman School of Music: "In addition to studying with the truly great guitarist Gene Bertoncini, I took some theory, some history and some improv courses. One of these, taught by Ray Ricker, was called New Concepts in Linear Improvisation. As I recall, there wasn't anything all that new about it and nothing very conceptual. It was linear, but at the outset it wasn't exactly improvisation. Basically, it was a legendary course at school that people would be kind of afraid of taking because there was something of a drill sergeant aspect to it. It consisted of playing a lot of scales and arpeggios from the lowest note on your instrument to the highest in lots of keys. Then in the summer version you played nothing but 'Cherokee', 'Giant Steps', and Rhythm Changes. So I took that course in the summer where it was like from 9 to 12 on Mondays, Wednesdays and Fridays, and then I had nothing else to do except go back in the afternoon and practice. And I practiced on Tuesdays and Thursdays, too! My roommate at the time was this spectacular baritone sax player named Mike Brignola. Mike was already a killer player, but we practiced together. We'd just sit out there on the front porch in Rochester in the summer and practice all this stuff. It had an interesting effect because I remember that at the end of the course, six weeks or something, I'm not sure if I really played that much better. Then I didn't want to touch a guitar for like a few weeks. When I went back and picked it up in September, I seemed to be at another level and that level kept climbing. It's like it built up somehow and took a while to internalize. But I had something charged up and some momentum from that particular summer of studying."

## POND SIZE

After a few years in Rochester, Palmieri was ready for another step forward: "There's another thing that I consider very, very key, which is this idea of the right-sized pond. In Rochester, I had gotten to the point where by the time I left, I had a lot of the really good work in town. And I realized, big fish in small pond. This has been great for a while, but it can't continue; let's shake it up. So I went down to the University of Miami where they had a terrific program, and they busted me completely down to buck private."

After three years, Palmieri earned a degree in studio music and jazz. He also gained valuable session experience: "Fortunately, they had this terrific faculty, and my guitar teacher Randall Dollahon was, at that time, the best solo guitar player that I'd ever heard. I received this level of mentorship where he said, "There is a recording session; we are going to do a record in two days, and they want a second guitar player – come on."

Palmieri stayed in Miami for a year after graduating to do live and session work. He played gigs backing artists like Ray Charles and Nancy Wilson and worked at Criteria Studios on sessions for Latin pop artists. The session work continued Palmieri's fascination with sonics: "The sound thing was something that I really started to focus on – recording a lot, trying to blend in, trying to stay out of the way of the other guitar player. So I started to think about pickups and electronics."

Palmieri used his time in Miami for other educational opportunities. Specifically, observing a session with another University of Miami alumnus, Hiram Bullock. Palmieri recalls, "The last year that I was in Miami, I was playing with a really sweet fusion band called the Ross-Levine Band. We played a lot of gigs, and it was sort of a popular thing. Fusion was not a bad word in Miami in the early '80s. And they were going to do a record, so they said. "Here's

the date? I thought about it, and I remembered that one of the co-leaders, Mike Levine, had been roommates with Hiram when Hiram was down at Miami during those Pat Metheny, Jaco, Bruce Hornsby days. I said, Mike, you know I'd love to do the record, but maybe you should call Hiram. I bet you it would be better. He said, 'Wow, you'd be okay with that?' I said, 'Yeah, my idea, I'm down with it. So he called Hiram, and Hiram said yes. And I went to the session, and this was a situation where I knew that book inside and out. I had been playing those tunes for so long. So I just sat there and watched somebody else way better than me, to see what they would do with the material, and I am so glad I did."

"This guy got deeper into the time than any Strat jockey ever has. It was like the Dexter Gordon of rhythm guitar. It would just sit so deep, just a little bit back, totally consistent – just staggering. Everybody wanted to hire this guy. He had the Saturday Night Live gig, he had the Letterman gig, he was Chaka Khan's musical director at that point, he had his trio with Jaco; I mean, he was the Cat and he deserved to be. It was the first time that I ever really met him. For me, Hiram has a place in the guitar pantheon that is unchallenged, which is depth of pocket in rhythm guitar playing."

## MAYNARD

Palmieri was again ready to swim upstream in search of musical growth: "After Miami, I moved to New York because I needed to get busted again and in New York City, I was a really small fish in a really heavy pond. I was there a couple of months, and I wasn't working, and I wasn't playing that much, and this call came through to come join the Maynard Ferguson Band. It was an opportunity to play instrumental music with really good players to a listening audience six or seven nights a week. That was very attractive to me, so I hit the road. The great thing about the Maynard gig was that we essentially played a gig every night and they





## '65 Melody Makers

Bob Palmieri reflects on two of his favorite electrics

It occurs to me that the last couple of recording sessions I've worked on have involved heavy use of two of my favorite axes, both 65 Gibson Melody Makers. I discovered years ago that sometimes when you go shopping for an SG, one of these is often a better choice! Much better neck, much less expensive.

I strip them down to nothing but finished wood and build up from there, with good tuners, wraparound bridges, big frets and, of course, much better pickups (all three of my MMs have different surface-mount neck units). Mine are featured heavily in both solo and rhythm applications on the upcoming Kandace Springs record and also on something I mixed last week with terrific engineer Tom Schick at the Wilco Loft: singer-songwriter guitarist Ben Bueltmann's Long Lost, also soon to be released. Ben's record is interesting in that I used another 65 Melody Maker with yet another set of very different prototype pickups for quite a few solos. These range from lots of single-note streams to almost pitch-free soundscapes. To be truthful, I do love my 62 SG/Les Paul, though. It's a Junior, with the original P-90 in the bridge position and a surface-mount 'bucker at the base of the neck "

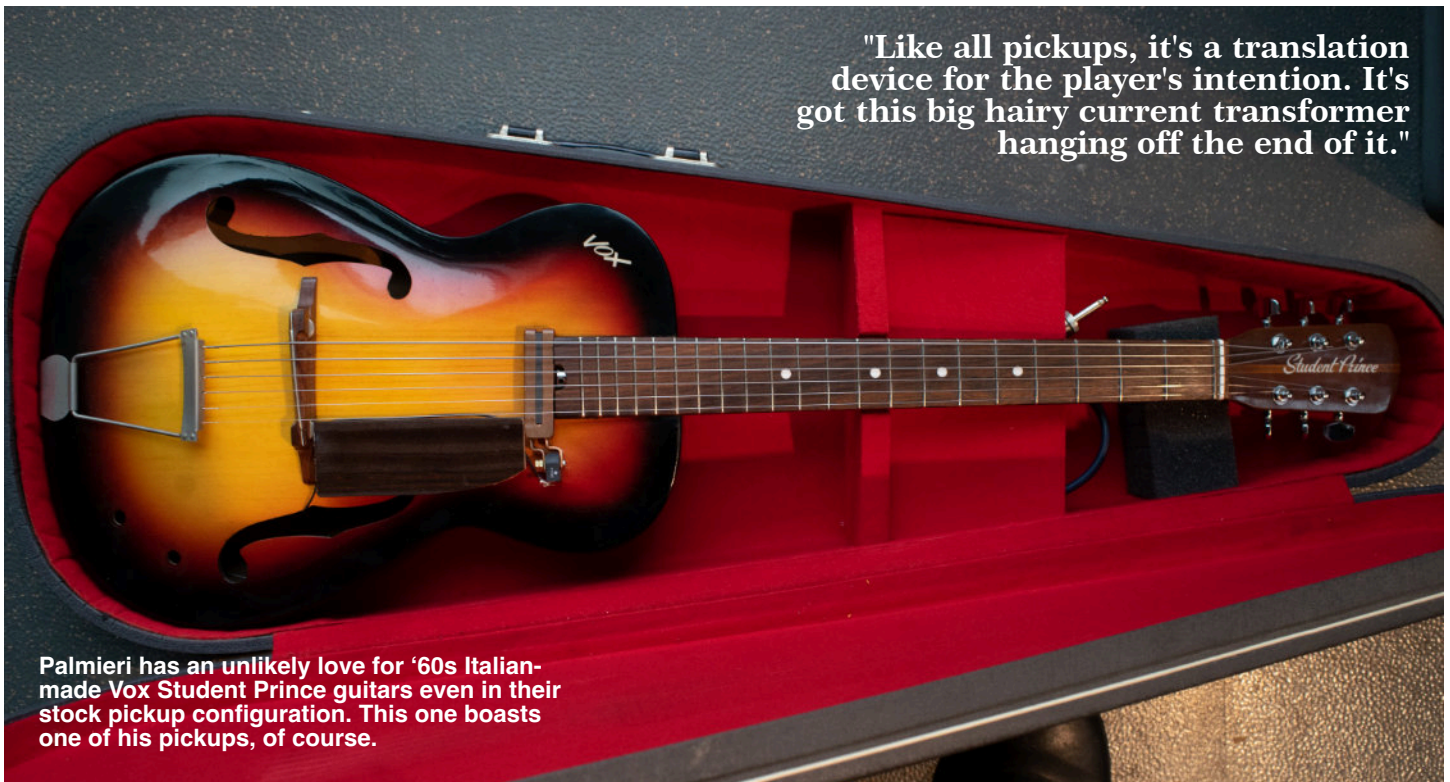
recorded every gig. And we listened to the recording the next day on the bus. So you'd have to listen to all your clams in front of all your buds. It was also a great learning experience because we were young, naive players that really wanted to groove. We really wanted to sit in the pocket and all of that kind of thing.

Maynard was beyond all that. He knew that a lot of the rooms we were playing were like high school gyms – nobody can tell if you're grooving in a high school gym; there's too much echo. So Maynard wanted the music to be sort of busy and rushing and lots of high stuff. Every once in a while, he would let us have our way and sit there in the pocket, and we could hear on the bus the next day that the applause would be kind of light clapping, as opposed to heavy clapping when we would do things his way."

## DED

The New York City area, as only it can, provided Palmieri with a chance encounter that proved to be profound. Palmieri shares: "During that period of time that I was playing with Maynard, I was back in New York on a break, and I was at a music store in New Jersey playing something, and some guy came over to me and said, 'Hey, you sound good!' He asked who I played with, and I told him Maynard Ferguson and he said, 'Oh, you should meet Ded!' And I was trying to figure out who's Ded? And he said, 'Ded loves Maynard and big bands.' And we kept talking, and he gave me his phone number and he leaves. Then the owner of the store, Jim Hovey I think, comes over and says, 'Do you know who that was?' And I said, 'No, who?' And he said, 'One of Les Paul's sons. And I thought, 'Oh, Ded is Dad!' So several weeks later I decided to call his bluff. I called and said I would love to come over and meet Dad. So he set it up, and I drove to his house in Mahwah, New Jersey. His son let me in and started to give me a tour of his studio. About 10 minutes later, Les Paul comes out! And he's sort of exactly what you'd expect. A

"Like all pickups, it's a translation device for the player's intention. It's got this big hairy current transformer hanging off the end of it."



Palmieri has an unlikely love for '60s Italian-made Vox Student Prince guitars even in their stock pickup configuration. This one boasts one of his pickups, of course.

somewhat diminutive, twinkly eyed, can do sort of a guy. And he showed me a few things like the first multitrack recorder. He says, 'Let's just sit down in the living room and talk.' He asked me how I practice, and I told him I take something I'm working on, and I turn on my cassette machine (this was in 1984!) and I play and then I turn it off and I go do something else. And I come back to it and listen and see what needs work, and I work on that. He says, 'You keep doing that and pretty soon you won't be able to play a note. He said he never listened to a single thing he recorded. And then he told me a story about an album he made with Chet Atkins: Chester and Lester. They recorded it together, and about six weeks later Chet called him and said he had so much fun playing with him, and he was listening to the tracks and 'there are a few things that maybe you might want to fix. And Les said, 'Send me the tape; I'll fix it up and send them back to you. "And do you know what I did?' said Les. (No, Mr. Paul...what did you do?)" 'I sent my assistant down to the post office and said, "Take your boxcutter, slice it open and close it up and seal it again and send it back." He didn't fix anything! And Les said they won a Grammy with that record.' Palmieri

continues: "We sat down around 6:20 pm and he talked and pontificated, and this went on until about 10:30 pm. And I thought, This is great!" And I realized that he was very much what I was striving to be: a serious player and a serious inventor. And that his electronics background was also based in this tradition of the American tinkerer."

## FROM DINO TO THE MET

It was also in New York that Palmieri crossed paths with guitar builder Ken Parker, a relationship that, years later, would result in a collaboration for the Metropolitan Museum of Art. Parker starts the tale: "I met Bob through a wonderful friend in New York, Paul Nowinski, a great upright bass player. I was building basses at the time but got discouraged with making six-string basses. So I decided to make a guitar. Paul told me that I should get Bob to handle the electronics, because I really don't know anything about [what] electrons do in the middle of the night. Bob lived in Queens when I met him and I lived in southern Connecticut, so it wasn't that hard for us to connect. He would come up to work at my shop on Thursdays – and it was just like school. We would try and figure stuff

out, and Bob would apply his talents to my projects. And we'd collaborate on pickup making – I would do the mechanical stuff, and he would do the electric work. We wound coils and played with magnets; we had a lot of fun together. And then he moved to Chicago, and in the pre-email age, it just wasn't tenable. He was getting involved in teaching, recording and performing in Chicago, so there was just no way for us to maintain a professional relationship, so I reached out to Larry Fishman."

This early period of work did result in a guitar affectionately called "the Dino," which Palmieri still has in his possession. Built in the mid '80s, it was well before the Parker Fly guitars, but it looks much like those forward-thinking instruments. With an individual string tailpiece and the use of whale bone and stainless steel, it is uncommonly beautiful.

Around 20 years later, Parker called on Palmieri's expertise for another project: creating a pickup for an acoustic archtop guitar commissioned by the Metropolitan Museum of Art. The challenge was to create a pickup that amplified bronze-wrapped strings but that required no preamp or battery to operate. After six years of



prototypes and testing (or tinkering), the result was the Bronzeville – an elegant design with a sensing coil under the strings and a large cancellation coil beneath the fingerrest. Palmieri calls it “by far the most difficult and rewarding pickup design project that I’ve ever done.” Parker says, “I really love the Bronzeville pickup. It’s great, and everybody that’s heard it freaks out. My customers that have it are raving about it. It works really well in the front end of a Fender-esque tube amp, and it’s also fabulous through a PA system, and the whole package is gig-ready.” And an early version now exists in the Met in a Parker archtop named Merlin. “Over the past couple of years, I’ve been getting quite a few requests to supply these components to other builders who are pursuing this noble goal of creating bronze-strung archtops. Just this past week, in fact, both Maegen Wells and William Dotson contacted me about getting Bronzeville setups for guitars they’re building. Fortunately, my partners in Duneland Labs have helped make these more broadly available.”

## WHATEVER WORKS

Palmieri is not one to sit still. He continues to his experience and knowledge to new concepts. One project is based on the vision of Mike Kirkpatrick, the late composer and guitarist from the Irish rock band The Drovers. Palmieri describes the work: “Mike’s idea was that Irish music and modern jazz need to meet, so he came up with this project where he hired this whole room of great jazz musicians – real greats. My role was to play guitar and to translate Mike’s concepts to the rest of the players. On one session, I looked around and said into the talkback mic, ‘Am I the only one person on this recording session that didn’t play with Miles?’ It turns out I was! I also got to play with one of my absolute heroes since junior high school: saxophonist Dave Liebman. We did a first take as a duo. Read through it with the red light on, looked at each other, and Lieb said, ‘Let’s go listen — I think that’s it! I am very excited about where this



**A Waterloo with a prototype Bronzeville as a soundhole pickup.**

music is headed. Unfortunately, Michael has passed away, so this project is now in my hands.”

Most recently, he’s added numerous guitar tracks to soon-to-be-released recordings by singer-songwriter-pianist Kandace Springs. “On Kandace’s record, I used my ’65 Melody Maker (with prototype pickups) on quite a few tracks, mostly for solos. However, on one track I really needed some sounds that were neither electric or acoustic, yet had characteristics of both. So I went over to the home studio of one of my favorite engineers in town, Jim Winters, and he put four mics (one stereo) on the Parker archtop. Then

we took one direct feed from the Bronzeville and two outputs from an analog direct amp/speaker simulation box I built in the ‘90s, also fed by the Bronzeville pickup system. So we had eight faders of Ken Parker archtop to blend into whatever sound we needed.”

Palmieri is also working with the Electric Guitar Innovation Lab (EGIL) at the Worcester Polytechnic Institute. In 2019, he partnered with them for a solo performance to demonstrate and explain their multi-channel/multi-amplifier rig. Palmieri explains, “The Electric Guitar Innovation Lab is one of the most forward-thinking organizations that

I've come into contact with, and it asks the question: Where does the electric guitar go from here? One of the projects I did was a demo of a device that they have which is a real advancement on the idea of stereo guitars. It involves active blending with footswitches so that you can send one pickup, like a neck pickup, into one clean amp and a bridge pickup to another amp that is pretty crunchy. Then you can use the pedals to blend and use different effects. It was way cooler in ways that I couldn't anticipate until I was sitting with that rig. Suddenly, dynamics had this whole other dimension. Another example of something that needs to be experienced."

Even when looking at the past, Palmieri is moving forward. Fittingly, he is working with the EGIL in collaboration with the Les Paul Foundation on their mission to advance the work of Les Paul beyond what he completed in his lifetime. One project involves Paul's design of a pickup that also basically functions as the bridge. Palmieri describes it: "It is from 1959, and as far as anybody can tell, it was never built. It's the only

pickup that Les Paul ever patented. When I looked at it, it was a really wild thing. I'm not sure that he could have gotten it to work with the materials of the day. The EGIL made a working prototype, and it is a very interesting device. After hearing the sound samples, there is something there. So it is something that we should pursue."

The idea for another Les Paul-based project came from a photo from the Foundation's archives. Palmieri explains, "It's a picture of Les Paul and Mary Ford in his studio. It turns out that there is a lot of signal-routing gear in terms of a mixer and patch bay, but there is only one piece of signal-processing gear in the whole studio. And that ancient device is a Cinema Engineering Aerovox 4031-B. A big, knobbed, gray-faced piece of rack gear that must weigh 20 pounds. It's one of the most dinosaur things you can imagine. They are not easy to come by, but I managed to procure a couple of them, and I sent one to EGIL and I am keeping one here. And we are in the process of doing some analysis on them. Because back in the days, when people just didn't

have programmability to deal with and didn't have a lot of sophistication, they knew a lot about things like inductance, capacitance and impedance, and so this thing is an actual constant-K EQ network, which is something that may have some real sonic benefits. And we are going to find out. We are going to get these things up to snuff, and then we are going to look at them with modern equipment and figure out what they are doing and see if they can be simulated in the usual ways with making plug-ins and pursue that particular line."

Seemingly never far from Palmieri's mind is how to realize the sonic potential of this roughly 85-year-old instrument – the electric guitar. How to do that doesn't seem to concern Palmieri: "I use what works. Whatever works—I don't care if I made it or somebody else made it. The reason that I make things is because I can't get it; nobody else has done it. That's really the bottom line, I guess, of why I make things. It's all in the name of making something really work the way you think it could work."



## These Pickups Are Alive

"Bob Palmieri's Duneland Labs pickups get close to being living organisms, so sensitive are they to the actual physics of nuanced sound production.

Alive.

And all the while possessing OOMPH, never being weak/wimpy/bland."

**Nels Cline, Wilco**

**DUNELAND LABS**  
responsive audio devices