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THE GUIDE TO NAMM 2005

Everything you need
to know about the

LR BAGGS PICKUPS

Success Built With Tenacity, Courage & Faith
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FEARLESS INNOVATOR LR BAGGS

Tempering his tenacious, risk-taking nature with his faith in God, Lloyd Baggs built a career making sharp turns—and world-class guitar pickups



THE LB-6 SADDLE REPLACEMENT PICKUP, introduced in 1980, was LR Baggs' first commercially available guitar pickup. It is still used by some of pop music's biggest stars.

It's fitting that Lloyd Baggs is into extreme sports. Hang gliding, sports car "canyon racing," and, currently, competitive downhill mountain bike racing mirror a career that has been defined, at least outwardly, by the risks he took. With ingenuity, remarkable resilience, nearly indiscriminate curiosity, and, above all, the tendency to fearlessly forge into disciplines he knew little or nothing about, Baggs handled every sharp turn to transform his name into a brand that's synonymous with world-class guitar pickups and accessories. "I've made a career out of saying yes—" he admits, "and then figuring out how to do it."

2004 was a particularly good year for LR Baggs, capped with three *Acoustic Guitar* magazine Players Choice Gold Awards for best pickups, best preamps, and most popular guitar performance

gear manufacturer. Those honors came on the heels of winning two consecutive MIPAs (Musikmesse International Press Award), which Lloyd describes as "the music products industry's Oscar." He attributes the recent wave of notoriety to LR Baggs finally achieving a "critical mass" of awareness among consumers, dealers, and OEM partners. "The same thing happens with musicians all the time," he says. "They play in dives and pound the pavement, doing basically the same thing for years, and then one day the number of people appreciating them achieves a critical mass and turns them into an 'overnight success.' We've never tried to market ourselves into a position of recognition; we've wanted to let our products speak for themselves. But it's wonderful now, getting recognized for what we've been doing for 15 or 20 years."

In his next breath Lloyd concedes that

LR Baggs has, over the years, gotten better at what it does. The company's iBeam Bridge Plate Transducer, for which it won the MIPAs in 2002 and 2003, exposed the industry to a different technology, and has become the company's most popular pickup. But that success was hardly isolated.

A few years ago Lloyd decided to add a soundhole magnetic pickup to the company's line. He tried licensing one or two from various manufacturers but wasn't happy with the deals they offered. "So we developed our own, the M1," he says. "We didn't know much about magnetics before that, and that ended up working to our advantage. That's been one of our strengths. Because we don't approach a challenge with preconceived notions, we tend to make 'happier mistakes' and attempt things that experts might not."

A "happy" prototyping mistake with

the M1 resulted in a great-sounding pickup. When the design team corrected the error, the result wasn't nearly as good, so they reverted to the great-sounding "wrong" approach. "We were trying to get a humbucker to sound like a single-coil," he explains. "By loosely suspending the bottom coil a quarter-inch from the main coil, we discovered that without adding a single extra part we could also use the secondary or humbucking coil as a dynamic body-sensing transducer. For realism and presence, mixing an internal mic with a magnetic pickup—and all kinds of expensive outboard gear—has been a preferred system for many players. Our approach is way cheaper than the typical mic-and-outboard rig. We also engineered it to be less sensitive to the vibrational mode of a guitar that

causes feedback. It took months of experimentation to find the best way to suspend the secondary coil and 'discipline' the additional sound source, but it ended up sounding incredible." The company has applied for a patent on the M1, which Lloyd describes as "dramatically different from anything else on the market."

As a teenager Lloyd Baggs found "a lot of interesting stuff," in the books his father, an aeronautical engineer, left around the house. ("I was a bit of a geek," he admits.) He applied whatever information he could understand to modify his slot cars and, later, the beat-up MG he raced hundreds of miles a week through the canyons of southern California.

No doubt contributing to his geeky persona, Lloyd was also a talented cellist, playing in youth orchestras and the UCLA Symphony while he was still in high school. Although playing the cello led to significant personal development in a number of areas, he confesses, "I hated it. I was a good enough cellist to overcome my lousy academic performance in high school and get into college,



CREDITING HIS FAITH IN GOD, Lloyd Baggs has "made a career out of saying yes—and then figuring out how to do it."

but in my first month I got into a fight with the freshman football team's half-back and badly broke my left hand. It was one of the best things to happen to me," he reveals sincerely. "It got me out of playing the cello."

By 1980 LR Baggs' acoustic guitars were fetching \$3,000, and he was selling them at least as fast as he could build them. **But he'd been "bitten by the pickup bug"** and began to let his guitar business slide.

Taking up the guitar ostensibly to rehabilitate his hand, he soon learned that his talent as a cellist didn't translate to guitar. "I loved the guitar," he says, "but I really sucked at it."

After leaving college and while enjoying a career in fine-art lithography

Lloyd took up woodworking as a hobby. He became "pretty advanced," applying his interest in Japanese joinery to construction of small, fine tables, boxes, and eventually guitars, taking frequent advantage of an Oakland guitar shop's trade-up policy after he'd modified his most recent purchase. "I wondered why a particular instrument sounded the way it did," he says, "so I went in through the soundhole and shaved the braces a bit or.... Sometimes they got better; sometimes they got a little worse."

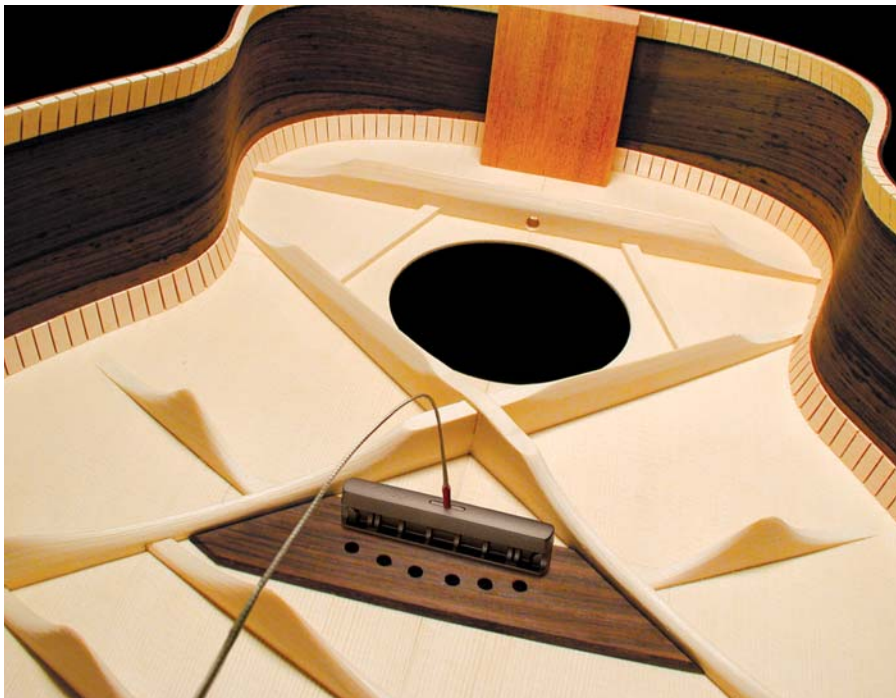
Working on better and better guitars for himself, friends, and his first customers, he advanced his theories on guitar design—along with his ambitions. In 1974 he bought relevant books and some wood from a local luthier and, over the next eight months, created a

guitar that was basically a copy of his Washburn oval-hole archtop. "About half-way through that process I thought, 'Wow, I want to do this for my life!'"

Proud of the guitar, he showed it to versatile fretmaster Ry Cooder, whom he had met through his litho art connections. Cooder asked him to make a guitar for him. "That kind of launched my new career," Lloyd recalls. In 1975 he moved to Los Angeles, built a loft in an old fire station, and set up a guitar making studio there. Before long he was repairing, restoring, and building about ten high-end guitars a year including two for Ry Cooder, two for Janis Ian, and one each for Graham Nash and Jackson Browne. At one point there was a two-year waiting period for LR Baggs guitars.

"But even though I was building guitars for some very famous people," he says, "they were playing someone else's guitars on stage because they needed an instrument with a pickup system. The pickups available then were just awful, and mics limited the artists' movement and were prone to feeding back."

In 1978 Cooder, who by then was a



LR BAGGS' iBeam BRIDGE PLATE TRANSDUCER won consecutive MIPA awards in 2002 and 2003.

good friend, asked Lloyd to visit him at Warner Bros. studios where he was laying tracks on *Bop Till You Drop*, the first major-label release to be recorded digitally. "He played me part of it and I fell over backwards at how good it sounded," Lloyd recalls. "I was really disappointed that he was recording his album with a Takamine rather than my guitar—the guys at Takamine had built him one with a pickup while he was touring Japan—but I was also intrigued that the pickup could capture such a beautiful sound. I decided then and there, that was the future and I wanted to be a part of it."

When Cooder and Lloyd visited the '79 winter NAMM show, Cooder introduced him to Mr. Hirade, who then owned Takamine. "He was gracious enough to send me a couple of pickups, and of course I had to take one apart. When I did, I said, 'That's it?' Little did I know how sophisticated it really was, but I was stupid enough to think I could build them."

By 1980 LR Baggs' plain cutaway acoustic guitar sold for \$3,000, and he was selling high-end guitars at least as fast as he could build them. But he'd been "bitten by the pickup bug," and he began to let that his guitar business slide while he explored his new fascination. "I'm monomaniacal," he admits. "I kept

Jackson Browne waiting more than a year for a new guitar."

Unable to find raw piezos to experiment with, he bought Barcus Berry Hot Dots and scraped away the epoxy to dig out the piezo. His first functional guitar pickup consisted of six Hot Dots imbedded in the bridge of his guitar, one under each string. In 1980, after almost a year and a half of R&D, Lloyd Baggs introduced the LB-6, a saddle replacement with built-in transducers. He immediately started peddling his first and only product around L.A., winning orders from a few dealers including McCabe's, Valley Arts, and The Guitar Shoppe in Laguna Beach. But by then neglect of his guitar making business left him broke. In fact, he'd already begun selling off his guitars and art, and he and his wife were in the throes of serious credit card debt. "The day that I couldn't afford a birthday cake for my daughter's first birthday I resolved to get a second job," he says, and it wasn't long before he started selling cars.

As abhorrent as car sales might seem to some, Lloyd took to it as he does everything else, with focus and resolve, but also an eye on how the experience might be usefully applied to his larger goals. He worked his way into the best Porsche-Audi dealership on the West Coast partly to pick the brains of the

buyers whom he presumed to have the skills and business acumen he lacked. "It was quite an education," he says. "I learned about business and people. In time I had money again, and I found that I loved selling and the adrenaline rush it produces."

While still working full-time selling cars, Lloyd spent his evenings and weekends building LB-6s with his wife, Nadine. With practice they refined their production techniques, improved their products' consistency, and gradually added a few dealers and clients. Taylor Guitar purchased a few pieces a month, and when Leo Kottke started using an LB-6, Lloyd could trace his tour stops based entirely on dealer calls from across the country. Other early endorsers included Steven Sheehan of the Judds, James Taylor, Kathy Mattea, and Phil Keaggy. Growing revenue helped them pay off their credit cards and eventually allowed Lloyd to quit selling cars. "I had assimilated some business knowledge from my Porsche customers, and I had learned some discipline," he says. "I felt like I might have a better handle on selling my own products."

By that time the Baggs also had a son and their daughter was old enough for the them to be concerned about raising their children in downtown L.A., so in 1986 they headed north, moved their pickup business into a two-car garage in Grover Beach, and hired two employees. They were making around 100 pickups a month when they got a call from Robert Godin, who had run across an LR Baggs pickup at the store of a mutual dealer. "Next thing we knew we were sharing a NAMM booth with Robert," Lloyd recalls. "That started the ball rolling for us, because Godin was our first big customer."

Godin needed a preamp as well. Lloyd had tinkered with hi-fi and studied the theory, but "didn't know how to make things work without having them blow up. Fortunately I had some friends and connections in the high-end home audio business, and I commissioned them to build a preamp."

As with his stint in car sales, Lloyd found or created valuable learning opportunities in almost everything he did. One reason LR Baggs guitars were in such great demand was the knowl-

LR BAGGS PICKUPS

edge of vibrational dynamics and guitar physics he acquired by joining the Cat-Gut Acoustic Society, a group of scientists doing laser interferometry and other studies on violins. (The geek lived on.) “When I saw the group’s test results and manuscripts on electronic circuit equivalence, wood resonances, and violin vibrational patterns, I thought, “Whoa, this is a goldmine, and I set about applying their techniques and tests to guitars. By stripping away a lot of the voodoo and superstition from the craft, I learned a lot about how the instruments vibrate. There’s nothing like science to accelerate experience.”

Based upon that science—specifically “the location of the primary resonance points in the guitar body that imbued it with its acoustic guitar character”—he was convinced he could make a semi-hollow-body acoustic guitar that sounded better than Gibson’s Chet Atkins model. His own LB-6 “didn’t sound that good” on the test instrument, so he affixed under the bridge a dozen vibrating rods that were tuned to the three major frequencies of a dreadnought and functioned “like little tuning forks. The pickup didn’t know it wasn’t on a dreadnought,” he says. “The rods gave it a really great sound.” He talked Robert Godin into building the instruments, and in 1987 Godin introduced them as the Tele-Acoustic (or Acousticaster) and the Acoustic Bass.

“We started selling those by the boatload,” he recalls. “That allowed us to hire about six employees and move out of our garage and buy a place with a bigger garage. We thought that would meet our needs for years, but it was only nine months later that we had to move again into a real industrial building. Over the years, as new units in the building became available we took over them so that now we occupy about 5,000 square feet and have 25 employees.” The company is now based in Nipomo, California, roughly 180 miles north of Los Angeles.

LR Baggs’ next hit product was the Duet, an onboard preamp that combined the LB-6 with an internal microphone through a crossover. Godin, its primary customer, used the Duet on its high-end Artist Series guitars.

The Duet was a success partly because it was cost-effective compared with the



LR BAGGS’ M1 is a soundhole magnetic humbucker whose bottom coil, suspended to move freely below the main coil, functions as a dynamic body-sensing transducer. A new active version will debut at the 2005 winter NAMM show.

standard mic, preamps, and equalizers it replaced. But even at a much higher price its sound would have won praise and buyers. Lloyd explains, “Other than the fact that we were the first company to offer such a product commercially, the unique thing about the Duet was that we used a pre-mixer crossover. The biggest problem with miking a guitar is feedback, which is all low frequency, and the biggest problem with piezo pickups in acoustics is that the midrange and highs sound kind of ‘plastic,’ though their low end is great and fairly feedback-resistant. So we designed a pre-mix crossover that used the microphone for the harmonics, and the pickup for the fundamental range of the instrument. As a result, you could crank it up really loud. We basically just replaced the nasty high end of the pickup with the microphone. That was definitely a landmark product that earned us a lot of professional attention.”

Around the same time LR Baggs unveiled its Para Acoustic D.I., a five-band EQ direct box aimed primarily at acoustic musicians. “At that time,” Lloyd says, “there were a lot of bad-sounding passive pickups that needed EQ.” Its features included a tunable midrange and notch controls, but the thing that really set it apart was the sound quality that came from using

Class A discrete components. Lloyd, who along with his “hi-fi friends” came up with the design, says, “It was ultra-quiet, sweet, and transparent. Usually EQs throw some of the baby out with the bathwater in terms of signal purity and harmonic integrity, but this wasn’t the case with the Para D.I. Over the past 15 years it has become our most popular product. Everybody can use it. James Taylor used one when he played the National Anthem at game two of the 2004 World Series.”

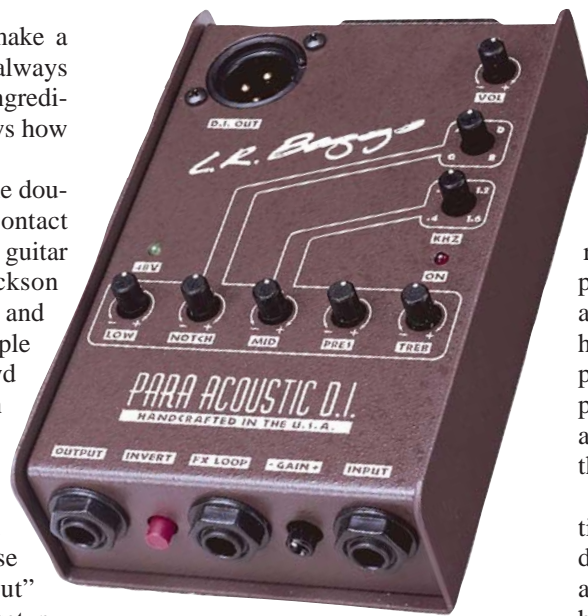
Recently LR Baggs introduced the Element, a new undersaddle pickup that epitomizes one of Lloyd’s primary design ideals. “We removed every unnecessary element—hence the name—between the transducer element and the saddle and bridge, which couples them as tightly as possible to the guitar. The result is that there’s minimal loss of vibrational energy and the sound’s texture, dynamics, and tonal nuance are retained. Pickups aren’t supposed to create anything, but they shouldn’t lose anything either. Different layers of damping, insulation, and mechanical connection desensitize the pickups. We use mostly discrete circuitry instead of op amps. Op amps have dozens of internal transistors that color the sound and add distortion. They’re the audio equivalent of TV dinners;

anybody can press 'cook' and make a preamp, but the best meals are always made with the best and freshest ingredients by someone who really knows how to cook."

The Element was preceded by the double-MIPA-winning iBeam, a contact transducer that adheres to the guitar under the bridge plate. "Jackson Browne prodded me to develop it and helped me beta-test it over a couple of years starting in 2000," Lloyd says. "With a good installation in the right guitar you'd be hard-pressed to distinguish its sound from a studio mic's." In fact, in 2002 LR Baggs booked time at Nashville's legendary Dark Horse Studios to stage a "shoot-out" between a \$400 iBeam-Para D.I. setup and a pair of multi-thousand-dollar Neumann KM 84 microphones. Lloyd invited about 20 members of the press to establish the credibility and fairness of the test. (MP3 files of this test are available for download on the LR Baggs website.)

At this year's NAMM show in Anaheim LR Baggs is introducing a new active version of the M1. Takamine will also debut an LR Baggs-designed and private-labeled soundhole magnetic pickup based on the M1 Active, calling it the Tri-Ax and marketing it as an accessory for its acclaimed Cool Tube preamp. "Takamine designed the Cool Tube with an auxiliary input, and they were looking for a second source," Lloyd explains. "This partnership is a dream come true for me; after Mr. Hirade's gift helped me to get into the business in 1979, it was like coming full-circle."

Also slated for a NAMM 2005 announcement is a new partnership between LR Baggs and Shadow Transducer in which Lloyd and Shadow President Joe Marinic have combined forces to create a new undersaddle pickup with a built-in subminiature preamp as well as a whole series of OEM-only products. Now in the final production



THE PARA ACOUSTIC D.I., a five-band EQ direct box specifically designed for acoustic musicians, has become LR Baggs's best-selling product.

engineering stages for the pickup, Shadow Transducers and LR Baggs each have a patent application on their respective parts of the technology. Says Lloyd, "The new pickup is spectacular."

Other manufacturers for which LR Baggs provides OEM products include Breedlove, Blue Lion, Carvin, Composite Acoustics, Crafter, Epiphone, Gibson, Godin, Goodall, Langejans, Line 6, McPherson, Olson, Paul Reed Smith, Rainsong, Rodriguez, Santa Cruz, Tacoma, Takamine, Taylor, Tom Anderson, Warrior, and Yamaha. Though Lloyd is delighted to work with these venerable companies, he is equally pleased to produce pickups for humble individual musicians, especially "the perfectionists or consumers who want to experiment with different pickups to discover their own sound. LR Baggs does very well with independent dealers because we offer a value-added that their customers can't find in a big-box store. They can use them to serve a genuine need among their customers and really add to their bottom line."

Lloyd attributes his company's rising

after-market sales to a number of factors. No retailer would be surprised to hear that the list is topped by value. "We try to engineer high-end sound into our product and then sell it for a price that a working musician can afford. Some would say our prices really aren't high enough to earn our products the respect they deserve." He adds that end-users and dealers alike have, over time, learned that LR Baggs pickups are "utterly reliable and bullet-proof," and that the company has "the acknowledged best customer service in the pickup business."

If Lloyd Baggs appeared fearless at times when others might have retreated down a comfier, more familiar path, he ascribes his prevailing confidence to a highly developed sense of adventure, bulldog tenacity, and, more importantly, the deep personal resources that reside in his Christian faith. "We started this business based upon prayer," he says. "My wife and I were at a crossroads when the car business intersected with the pickup business. It was a big decision that would determine how we would care for our family. To make that decision, we sought the Lord in prayer, and the deal was: 'Okay Lord, we'll do this, but You have to help us.' And He has helped us all the way. The Lord gives you opportunities and knowledge and all sorts of help if you just ask. But you have to do the work; you have to put the wood in the fireplace before you get the heat. All of the success principles that we use at LR Baggs come right out of the Bible—the way we treat our employees, the way we treat our customers, the way we accord ourselves in public—and of course the care we put into the design and manufacture our products. We are grateful for and want to honor the Lord in return for the talents and opportunities He has given us. That's why I continue to plow forward. You have to give 110 percent of your best. I'm determined that when I die I won't leave a nickel's-worth on the table; I'm going to use it all."