



Photo: Huw Price



Vaughan was able to nail Albert King's 1958 Flying V tone using a Stratocaster.

The first thing I noticed was that, when you turn down the volume controls, there is no loss of clarity whatsoever. I've tried '50s wiring with the tone controls connected to the output of the volume controls and it helps, but this was something quite different.

With the volume controls backed off, the bridge pickups took on a country-style tone with a distinct quack and the in-between settings were noticeably phasey and even funky. The middle setting was well suited to Chet Atkins and rockabilly-style picking too. The neck pickups had such a vocal quality that I had the strange sensation of 'singing' through the guitars. The neck settings were also suffused with so much natural

woodiness that they sounded almost semi-acoustic and jazzy.

The other odd thing was that I didn't need high volume or high gain to achieve the most incredible sustain. But when I did crank the amp the old Lesters really started to snarl and bite. The classic tones you have heard, and probably struggled to replicate, were all there at my fingertips. The guitars simply felt alive, responding to playing touch with an almost supernatural sensitivity.

Another characteristic became apparent when holding onto single notes and adding finger vibrato. As a note gradually fades, harmonics shifting all the while, you're left with the sound generated by friction from the string rubbing against the fret and fingerboard. That friction noise is

almost as loud as the note itself and it's an effect I've heard on countless classic records.

### Cracking the code

We've all heard about million-dollar Les Pauls, so here's the million-dollar question – why do those old Gibsons sound the way they do? I was on a mission to find out.

With some trepidation I had already taken my humble '82 Greco Les Paul copy along to compare with the real thing, and it had been a bit of a reality check. My Greco had all the desirable features – a long tenon neck joint, an aluminium tailpiece, '50s wiring, paper/oil 'bumble bee' tone caps, a neck profile that's a dead ringer for a '59 and a set of boutique PAF replicas. At full volume it acquitted itself well considering the disparity in value, but the backed-off tones and touch-sensitivity fell depressingly short.

Vintage Guitar Boutique kindly sent me home with a set of PAFs to try in my Greco. Although it felt a bit like hanging a Van Gogh on the wall of a suburban semi, I wasn't

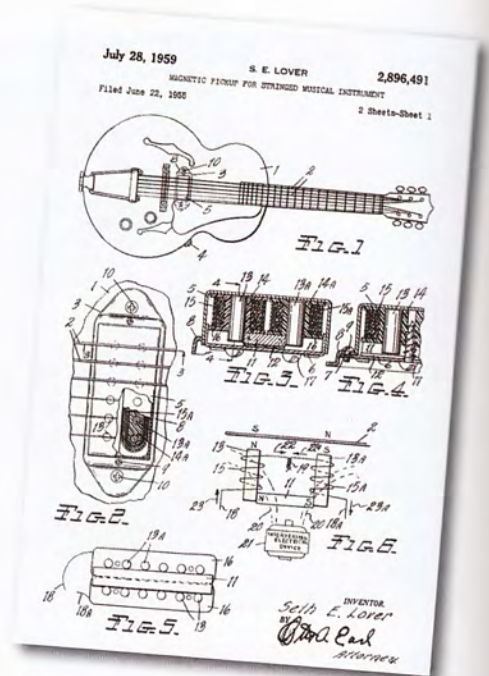
**When I did crank the amp the old Lesters really started to snarl and bite – the classic tones you have heard were all there at my fingertips**



Original PAF's complete with the famed 'Patent Applied For' stickers about to be installed in our Greco test guitar



Seth Lover's very first humbucker prototype, mounted in a P90 housing and right the patent filed in 1955



## With the PAFs installed, the sound and response of my Greco copy was almost indistinguishable from the four late-'50s sunburst Les Pauls

complaining. To cut a long story short, the transformation in the Greco was astonishing. When I went back with the PAFs installed, the sound and response of the Greco was almost indistinguishable from the real bursts. Naturally there were differences between the four vintage Les Pauls, but the Greco was within the ballpark of all of them.

Needless to say, this came as a bit of a shock to everybody present. My experience led me to conclude that, if you are really serious about nailing a '50s Les Paul sound, the pickups are the most important ingredient by a considerable margin.

### Monty's PAF replica

During the time I was enjoying my adventures in 'Lester Land, another well-

known burst aficionado tipped us off about some PAF replicas that Matt Gleeson from Monty's Guitars had been developing. He insisted they were the most accurate-sounding reproductions he'd ever encountered and, since he's a man whose opinion we trust and respect, we thought it was an opportune moment to try out a set.

We made it clear to Matt that his pickups would be going up against the real thing and he seemed genuinely unconcerned. We soon discovered he had every reason to be confident because he had based his replicas on his extensive experience with genuine vintage PAFs – as described in the interview on the opposite page.

Putting the Monty's PAFs in the Greco went some way towards easing the pain of

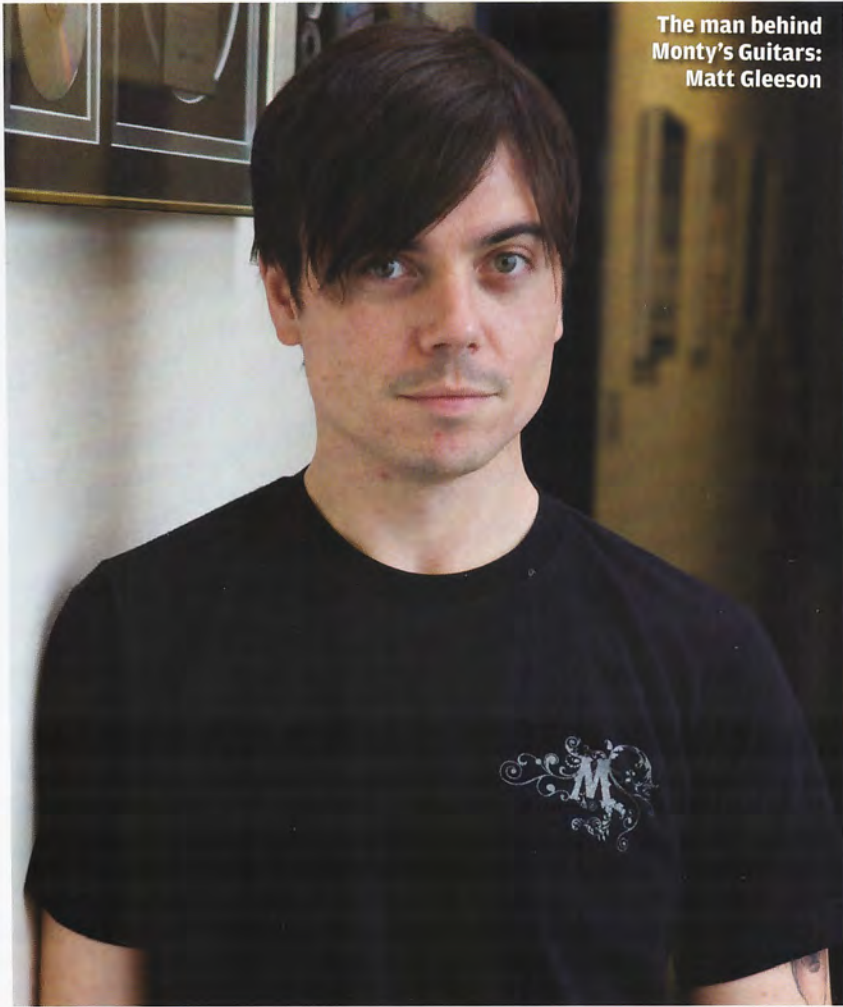
giving the vintage PAFs back to their owner. The reason was simple – we found that the Monty's PAFs sounded and responded just like the real thing. We wouldn't go as far as to say that they're the only PAF replicas that achieve this, but we haven't tried any that come closer.

These are humbuckers for expressive guitarists who like to play with a lot of dynamic range and use their volume and tone controls to coax a wide range of clean and overdriven tones from a valve amplifier. If you prefer to play with high gain all the time and never use the controls, you'll still get great tone, but you certainly won't be exploring the full potential of these outstanding pickups.

Given the quality of Matt Gleeson's work, and his success in recreating vintage tones, it was time to get more in-depth about the man, his philosophy and the challenges of making old-school sounding pickups. And so we did...

Photo: Huw Price





The man behind  
Monty's Guitars:  
Matt Gleeson

Photos: Mike Prior

# Q&A

## Matt Gleeson Monty's Guitars

### How did you get started in guitar work?

After graduating from the Guitar Institute's one-year diploma course in 2000, I was offered an apprenticeship at Chandler Guitars. I was in the perfect place because they had the best guys working there and we had all the name players as customers.

### What made you gravitate towards making pickups?

I was always playing in bands alongside the repair stuff and it was that constant quest for tone. I never quite got the sound I had in my

head. I came to the realisation that pickups are where it all starts. It's the physical vibration of the string turned into a signal, and that's the key.

Eventually I started experimenting and swapping coils around. I would take readings from everything and keep notes. It was all about piecing it together and figuring out why things sounded a certain way. Then, about four years ago, I built myself a winding machine and I spent the next year trying things and sending pickups out to get player feedback and opinions.



Monty's bassplates even carry a replicated 'Patent Applied For' sticker

### During your time at Chandlers were you able to try out guitars with real PAFs?

Yes, loads, because the workshop had plenty of customers with very valuable guitars. I hadn't realised how great PAFs can sound until I tried some in an old ES-335. It sounded big, warm and three-dimensional but also clear. You really could play anything on that guitar.

### Do old PAFs justify the hype?

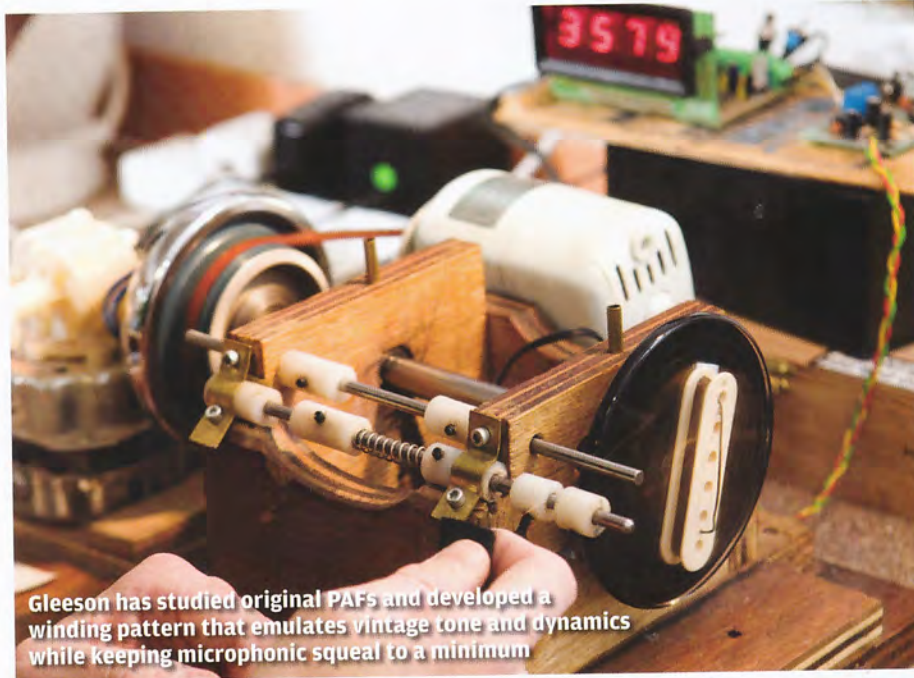
Good ones do absolutely, but you get bad ones too. They're inconsistent, which is also part of the joy of it. Finding an old PAF is hard enough, but you've really got to trawl to find the great ones. All the ones I like have the humbucker-style tonal width plus sparkle and shimmer. They just cut through better. These days I can tell whether I'm going to like the sound or not before I plug one in, just from taking readings.

### Did you do a lot of research into the original materials?

I became a bit obsessive, scouring anything to do with old Les Pauls, PAFs or whatever. I was watching videos, reading books and posts in the dark depths of web forums. Once I felt →



The bobbins Matt uses are butyrate plastic while the spacers are maple wood



Gleeson has studied original PAFs and developed a winding pattern that emulates vintage tone and dynamics while keeping microphonic squeal to a minimum



Post winding the coils need to be insulated with tape

I had a handle on the parts I needed, I started trying to find people who were making the bits – but some were better than others. Eventually I decided to try to find people who could recreate the parts for me, which again was a difficult process. All my parts are made in the UK except the covers, but they're the next thing on the list.

My base plates are nickel silver, the screws and keeper bars are steel and the bobbins are butyrate plastic with maple wood spacers. They all make subtle differences but the metal cover makes the biggest difference of all. The originals were nickel silver but the thickness is crucial if you don't want to lose that open sound. I had to find the right old plain enamel-coated copper wire too.

Coil shape and size makes a huge difference. Certain wire coatings are marginally thicker, and although we're only talking about thousandths of a

millimetre, it does make a difference when you have 8000 or so turns.

When I had got the prototypes sounding really close, the last piece of the puzzle was getting the coil tension right. The original PAFs weren't wax-potted and I don't pot mine. I didn't want them to squeal, so I had to find a way to wind them loose enough to keep that open quality but tight enough to withstand decent amounts of gain. With too-tight coils, you lose some of the touch response.

**Surely merely assembling the correct parts doesn't guarantee you'll achieve the correct tone.**

Well no, but that's like vintage PAFs in a way because they varied so much. Just because a PAF might measure 7.5K doesn't mean the coils both read 3.75K. All the PAFs I have liked had offset coils to a certain degree. If there's

too much offset they have different qualities that some people might like, but they're thinner-sounding and that's not what I'm trying to achieve. Then if the coils are identical, all that clarity is lost. Maximum hum-cancelling comes with maximum treble reduction.

The PAF treble I'm talking about is not like a Tele bridge pickup. It's more like a shimmer that will cut through and allow you to hear yourself when you're playing with a band without having to crank your amp right up. I think that's where the magic is sonically, but it has to be sweet rather than shrill treble and it must be combined with really rich mids.

**Did you ever get a chance to 'un-wind' original PAF coils to see how they did it?**

When I was doing re-winds, yes. They were all machine-wound rather than hand-wound but the machines they used weren't like the modern Japanese machines. The new ones have the bobbin really close to the machine but the bobbins were further away on the ones Gibson used so the wire jinked around more. The result was that the coils were 'scatter-wound', as we call it, and there were variations in coil shape. The winding pattern I use allows me to keep all the harmonic richness, but it's controlled enough to play loud and really push them without squeal.

**Did the originals vary much in DC resistance?**

Yes, because back then the pickups weren't calibrated for neck and bridge, they just came off the machines as they were. I've seen PAFs ranging from 6.5K up to 8.5K, although those very hot ones are extremely rare. It's said that the machines didn't have counters so the operators used a timer, and I believe that is probably true. You can imagine how a



All Monty's pickup parts are made in the UK except the covers



Pole pieces are set to the correct height



The pickups are now ready to be attached to the nickel silver bassplates



Pop it into the nickel silver cover and after a polish this 'Humdinger' unit is ready to rock

'The PAF treble I'm talking about is not like a Tele bridge pickup. It's more like a shimmer, and I think that's where the magic is sonically'

machine might have been stopped early if it was time for a break, or left running if the operator was distracted. Even a few seconds under or over would make a difference.

Also, there would have been loads of other equipment in the factory drawing current, so the speed of the winding machines would have varied throughout the day. The joke is that you ideally want a PAF for the neck that was wound late on a Friday afternoon and a PAF for the bridge that was wound first thing on a Monday morning.

**What options do you provide for customers who are ordering your PAF replicas?**

You can have any of the typical coil colours, so that's double white, double black or zebra. You can have nickel or gold screws and covers, and I can age them. It does take a long time to get everything right. For instance, the original paper tape around the coils had a fine lacquer that goes a little bit grey, so I have to paint mine to look the way they should.

**Finally, do you think there's a discrepancy between expectations of what vintage PAFs should sound like and what they actually sound like?**

That's a tricky one because they have had so much hype that in your head you're expecting them to be the best thing ever. I think a great PAF is exactly that, and everything you've been led to believe. People may be sceptical but they really are.

The first PAFs I tried sounded different from what I had expected, certainly not that typical humbucker midrange thing. Since then I've been able to play loads of guitars with PAFs. I've also had the opportunity to take vintage PAFs apart to measure and fix them. I was even able to borrow sets to compare with the prototypes when I was developing my PAF. Most pickup makers never get the chance to do any of those things so I've been really lucky. 🤘

For more info, go to [www.montysguitars.com](http://www.montysguitars.com)



The care and attention that goes into each and every pickup pays dividends in the tone



The finished article