



NAME BEHIND THE NAME JOE MALONE: JLM AUDIO

In a world dominated by mass production and max profit, JLM Audio prefers to build great circuits. But the brand name is less familiar than the name behind it: Joe Malone is the man behind this Queensland venture...

Text: Brad Watts

► Once you've used well-designed, hand-built audio equipment, it's very hard to go back. Apart from the superior quality of the signal path, there's the satisfaction of grabbing a smooth, well-made pot; then there are the 'mmm, good 'n' sturdy' military precision casings; the 'exacto' panel etching, and the unalloyed joy to be experienced from an oh-so-perfectly-weighted and tastefully-lit VU meter.

Joe Malone is a man who appreciates great audio kit – real sonic character, smooth pots, sturdy cases and quality VUs are his bread and butter. As Joe escorts me down into the bowels of his inner Brisbane worker's cottage – a venue that was once the hangout of the Go-Betweens – we eventually arrive at his basement workshop. It's here that I suddenly find myself plunged into audio-tech nirvana. I'm surrounded by countless drawers of electronic parts – capacitors and resistors by the bucketful; and chickenhead knobs and potentiometers by the truckload.

At first glance, the workshop has a touch of the anarchic about it, but first impressions deceive – JLM Audio is a well-oiled, ready-for-combat machine. Each and every drawer is meticulously labelled, and each tool and wotsit most definitely has its place. Joe's two cohorts, Matt and James, busy themselves at their soldering stations. James is organising a pile of the JLM Class-A

'99V' op-amps, and I'm privileged enough to see what actually goes into the unit before the resin surrounds the components – firstly for thermal stability, and perhaps just as importantly, shielding them from any unscrupulous 'copycat' eyeballs.

Sitting on Joe's bench are a stack of vintage microphones, snug in their cases. The two that grab my immediate attention are a pair of Telefunken U47s. They're in extraordinarily good condition for their age. So good, in fact, that initially I didn't believe they were genuine... but sure enough, being a vintage audio 'tragic' I had to have a closer look – and they're gems. Joe explains that he had to buy someone's entire collection, which also includes one of the best AKG C12s either of us has ever seen. I'm already wondering when I can move in. *Hmm. Joe and Brad... roomies... that could work.*

GOING IT MALONE

Brad Watts: So when did JLM Audio kick off?

Joe Malone: I've been making JLM gear for over 20 years now. Our business grew up through work from local and international bands, and in 2002 we finally set JLM up as a company. We've had so much success of late with our new 500 series gear that we're moving into somewhere

“ people tend to pay far too much attention to the technical specs of a product and not to what the real story is, which simply involves using your ears. ”



Fully loaded: The JLM 500-series rack custom built for AT's very own Gavin Hammond, includes 99v and TG500 preamps, two PEQ500 EQs and two headphone mixers.

bigger to keep things running smoothly. The new building has plenty of space and a really high ceiling, so it should be a pretty cool place to work. We won't necessarily be expanding – we'll just have the room we need to keep things under control.

VINTAGE CHEESE

After further perusal of the JLM Aladdin's cave, I spot various top-notch items of vintage equipment...

JM: We buy heaps of vintage gear. They're nice bits of kit to own, and we do hire certain stuff out to folk around Brisbane. My original AKG C24 is super rare – one of the first few hundred serial numbers – I reckon it's recorded half the stuff done in Brisbane. I've also got an AKG C28a, it's like a valve 451E with removable

capsules – that's *really* cool. There's also Neve compressors and Pultec EQs that I've slowly reconditioned; they all get hired out as well. It's my own little fun collection.

BW: So compared to the revered classics, how do you think cheaper mass-produced gear stacks up?

JM: (laughs) See the funny thing about that end of the market is, I can't understand why some of those manufacturers didn't spend five dollars extra and make a decent preamp. There's no reason for it really. And it seems to me that people pay far too much attention to the technical specs of a product and not to what the real story is, which simply involves using your ears – what it sounds like. Plus there's a lot of stuff out there that's *really* difficult to service. Some pieces of gear have to be entirely dismantled – all the knobs taken off and pots unbolted from the front panel – before you can get in there to replace a two-dollar component.

We're also really big into the feel of things. I can't believe some bits of supposedly nice kit that have weak and wobbly pots and controls. For mine, it's gotta be built like a tank and feel really good to use – I love that stuff!

ON THE RACK

Sitting on the shelf next to the vintage esoterica is one of Joe's new 500 series racks. These use a standard API 'lunchbox' chassis and power supply, and accept the new JLM 500 series preamps and EQ units. This one turns out to have been commissioned by none other than AT's own Gavin Hammond...

JM: This is the most elaborate one we've made so far. We've combined two of the mixers to make a 12:2 headphone mixer. We've then added some VU meters to take up some of the unused space in the rack unit. The mixer section is completely separate from the preamps and EQ; there's actually 12 inputs at the back, and if you don't plug into these rear TRS points, the pre and EQ modules are half-normalised into the mixer section.

BW: So why has Gavin gone for one of each preamp type, rather than a pair of each?

JM: Variety mainly. The (single channel)

Dual99v is just massive on vocals, while the TG500 is huge on guitars. Both the TG500 and Dual99v have variable impedance, which gives each pre a huge range of tonal balance. He's only gone for one of each for the extra flavour options, and there's not enough space in the lunchbox for two of each type. If he needs to process stereo material afterwards, it's just a case of running both sides through the pre and matching the files up afterwards. The 500 series gear has just *flown* out the door recently. After redesigning our preamps and EQ to run on the 16V rails (that any 500 series lunchbox uses) and keep the same headroom characteristics, they've been a massive hit for us.

BW: I know you do a lot of 'kits' that anyone confident with a soldering iron can put together. What came first, building custom gear or the kits?

JM: Building gear. I started building gear because I couldn't afford the good vintage stuff for myself. I'd gotten used to playing with this stuff in the studio – Pultecs and Neves etc – and just *had* to have some of that gear myself. The only way to make that happen was to build my own. The kits kinda came out of that ethic. Magoo (Black Box Recording, Brisbane) still has one of our original LA-2A clones, and they were built 18 or 19 years ago.

The JLM99v was developed in early 2001 through to 2004. I was building lots of different discrete op-amp topologies, to see what sounded best in different applications and what could run on high voltage rails for extended headroom. The first kit was the Dual99v kit, which came out in 2004. At that time I was racking heaps of old vintage gear, a process that involved several repetitive bits that I was hand making for each job.

So, first came a five-rail power supply designed to power almost any audio device. Then I developed a kit to provide 48V phantom power, pad and phase switching to old Neve line amps that were getting converted to mic pres. I call that the 'Go-Between', which was a literal name as well a tribute to the Go-Betweens, who I'd worked with at different times.

They were originally only made to help me rack



The Dual 99v mic preamplifier.



The JLM PEQ500 'Pultec styled' passive equaliser.



500-series modules are all the rage again, with numerous companies releasing modules in this classic form factor. The JLM PEQ500 (left) and the Dual 99v500 are proving hugely popular worldwide.

Not for much longer: Joe Malone in the 'dungeon'.



old gear quickly and more efficiently. Then it led me to thinking that perhaps some DIY guys might want to use them. So I worked out the pricing and mentioned them on some forums and the orders just started rolling in.

Everything was selling so well that I fine-tuned the power supply design into a neater five-rail, called the Powerstation, and a newer three-rail power supply, called the AC/DC. Then I started designing a Go-Between Plus, which accidentally grew into the Baby Animal mic pre. That's turned into our most popular kit to date.

The kits have grown into their own thing, with three or four new kits every year to date.

GOOD FROM BAD

BW: Is there any single thing that separates the good mic preamps from the bad ones?

JM: I think the biggest thing is that most people are using the wrong types of pre's, especially if they're recording rock music. There are some good preamp designs but I think they're used for the wrong purpose. There's a preamp design that's been used by SSL and Amek, based on a topology that was actually designed by Graeme Cohan, an Australian guy who worked for National Semiconductor. It's a very pure and fast preamp and a configuration that's great for recording at a distance in a good room – like most orchestral work. But it's not so good when you're shoving a mic three inches from a snare drum and having to deal with a really accelerated transient speed and tonal imbalance.

BW: What's brought that about then? Do you think there's been too much of an emphasis on so-called 'clean' signal paths? For example, we've been through an era where if something couldn't pass a 20Hz to 20kHz signal it was considered rubbish.

JM: The 20-20 spec is a good basic test, but it doesn't tell you anything about how the pre will sound for warmth or colour. Our Dual99v and TG500 both test 20-20k but they sound nothing like each other. That's why people are going for all this vintage stuff, like the V76s and what have you, because they can't believe how fat it sounds. I think this is the real issue. When you're close-miking an instrument, especially drums, it's almost a case of two wrongs resulting in a right. There's so much brightness and the mic is so close to the sound source that you want a pre that will absorb some of that attack. Transformers in the preamp path will do that for you. To a degree, transformers will absorb sound like your ears do. So, for my money, close miking really requires the warmth of a transformer.

Most people are close miking these days, but you don't want that transient speed sent through the pre and into a digital recording system, which in itself is a very fast medium. The result just doesn't gel together very well. The older Neve pre's almost take that approach a little bit too far, so in our version of the old 1073 or 1290, we actually use a faster output transformer that stays flat under all loads. The old Neves can vary a lot, depending on the output load.

BW: You mean the output impedance of the preamp?

JM: Totally. People don't realise that. With an old Neve module, where the output is sent into a 10kΩ Digi 002 or something, suddenly there's a 3-4dB bump in the top end. Then you go into a 600Ω load and you're *struggling* to get to 20kHz. This is the trouble, people take vintage gear out of the era it was used in and combine it with all their new stuff, which is all high impedance and hotter levels – and often end up with less than ideal results.

A lot of the vintage remakes or clones will sound different when plugged into different devices – it's an unpredictable topology. We don't like that to become an extra variable in the recording process. The JLM design philosophy is to keep our 'fat' sound happening no matter what our pre's are teamed with. The variable input impedance control on some of our units is really good.

We're also really into making things with clear starting points on the controls. For example, our impedance controls will have a centre detent that denotes the best starting point. Our Dual99v pre is set up with 5dB steps and a 5dB trim control – so you can't go wrong with your signal-to-noise, you're forced to do it the right way. But then, if you know what you're doing and want to get a bit more 'sound' or colour out of the unit, the trim control can be switched so it becomes a full-on fader – you can overdrive the pre 10-15dB and really get it to start welling up and changing its colour. Both our TG500 and Dual99V preamps have this same feature, and we're about to do a Neve 1290-style pre as well. We just like to keep things operationally sensible.

500 GOOD REASONS

BW: I noticed you have a little 500 series Pultec... is that based on an EQP-1A?

JM: The PEQ500 you're talking about has similar features to a Pultec EQP-1A, but it's certainly not the same. We wanted to outdo most Pultec-clones, so the unit's got way more frequencies to choose from and ours can do the same job as a Pultec 1R [a quite rare Pultec design with a switchable shelf]. When you press the Q control, a blue LED lets you know the unit is in shelving mode. The boost control becomes a shelf and the Q control affects the slope into the shelf. Plus, the circuit is driven by our 99V op-amp on the way in, so there are no impedance changes when you alter the EQ setting. The input impedance of an original Pultec will change continually. With full treble boost with full Q the input impedance gets down to about 150Ω, which most modern gear can't drive properly. The PEQ500 has been designed so that, no matter what you're using it for, you won't have to worry about these sorts of impedance mismatches.

BW: So what's the attraction of the 500 series form factor?

JM: It's cool because everyone can start with a single channel and build up the 'lunchbox' as

they go. With the more traditional racks you're stuck with formats of two or four. With these lunchbox racks we can build to a certain size and spec, then the customer can pick and choose their flavours. We've even built a mixer in this format – the first company to ever do that. With the mixer module you can use it to directly monitor signals for latency-free recording, you can even use it to sub-mix stuff back into your DAW. It's a super-clean summing section and one of the few devices we make where we intentionally don't add any colour.

We've got plans for new 500 series products, compressors specifically. Eventually we'll be making our own lunchbox unit that will hold eight modules, with the power supply at the back rather than taking up front space. Then we'll probably be looking at some kind of single unit rack that will accept the 500 series modules as well.

BAM – THANKYOU MA'AM

BW: I had no idea you were building monitors as well. Can you tell me a little about them?

JM: The BAMs? They're based on time alignment concepts similar to what Dunlavy came up with. There's mechanical time alignment and then there's an electronic equivalent. Dunlavy never continued with the concept, but we've gone ahead with built-in amplification, and we use full active extension roll-off and a full mathematical engine for the

crossover – it doesn't use a filter as such and isn't found in any other speaker.

It's all-analogue circuitry, but what it results in is, if you put a square wave into these monitors, three metres away from the front of the monitors you won't see the tweeter and woofer signals torn apart into a triangle waveform. The square-wave is reassembled. They're a very fast-sounding speaker and there are three 140W amps in each cabinet so they pack quite a wallop. We've cheated a little bit with some extra porting in the cabinet (Dunlavy always kept to sealed designs) but the results are pretty astounding. We've probably got about 40 sets out there in studios at the moment. I've had offers from companies to actually make them in the US but I'm not keen on letting these get out of my hands and mass produced – the smallest errors in construction could end up with some less than optimum-sounding monitors – I'm basically not prepared to let anyone else look after the quality control.

JOE – GOING BANANAS

After a smattering of listening tracks I'm suitably impressed with Joe's monitors. The bottom end is quite incredible and, as Joe suggests, the vocal effects seem to almost hang behind the main vocal parts like a different entity. The image is also surprisingly deep, a testament to the speed and time alignment of the monitors. As you can see from the pics, the BAM monitors are a ported, dual bass driver

design, akin to the D'Appolito concept [two drivers either side of a central tweeter], but Joe shows me a smaller prototype that uses a single bass driver and tweeter that's yet to be put into production. The rationale is: people want the BAM sound in a more portable cab.

Of course, finding myself in the bowels of the JLM Audio powerhouse, I couldn't help enquiring about getting a few Neve modules I'd collected over the years, racked and powered up. The workshop goes quiet... Joe explains that vintage retrofits is a market JLM is attempting to avoid. Sure, there's always the odd rebuild he can't say no to but as far as JLM Audio is concerned there are bigger and better fish to be frying. And after having a listen to the JLM devices and taking on some of the JLM ethic and advice, I'm thinking there's probably a better and easier way.

Vintage gear is just that – vintage. It constantly needs maintenance and can often be nowhere near as good as a combination of old-school transformer technology combined with modern sense and design. Joe Malone is a fellow who combines these virtues extremely well. ■



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