

INTERVIEW WITH SINGER/SONGWRITER STEVEN WILSON ON THE FUTURE BITES

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A Family of Microphones Compared The Mojave MA Series

By Paul Vnuk Jr.

Stylish new looks and a broad palette of inspired classic sounds

Last month we relaunched our recurring feature, *A Family of...Compared*, spotlighting product lines that continue to be valued studio tools, whether they be one, five, or even ten or more years in production. Last issue, we did a deep dive into the Audio-Technica ATH-Mx line of headphones. This month, we look at the beautifully evolved Mojave MA series of large diaphragm condenser microphones.

The Mojave Audio Family

Mojave Audio is a partnership of engineers Dusty Wake-man and Colin Liebich, showcasing the condenser mic designs of David Royer, who is known for reigniting the ribbon mic revolution with Royer Labs—his ‘other mic company’.

Mojave Audio was born in 1985 in Fullerton, CA as a garage-based, one-person custom shop for designing, building, and modifying custom audio devices. The prototype Royer R-121 (now the longtime worldwide gold standard for ribbon mics in its class) sported the Mojave name. The ribbon-focused Royer Labs got off the ground first, and then in 2005, David Royer returned to the world of condenser mics with the Mojave Audio MA-200—and the rest is history.

The Mojave line currently consists of the MA-50BLK, MA-200SN, MA-201fetVG, MA-300SN, MA-301fetVG and the

MA-1000DS. Each model is designed in the US and manufactured overseas, but in a unique twist, many US-made components are shipped overseas for assembly.

RECORDING History

Scott Dorsey offered readers the first look at Mojave Audio mics in his January 2007 review of the MA-200. Dave Martin put the MA-201fet through its paces in December 2009. I reviewed the MA-300 in January 2012. Next came the entry-level MA-50 in November 2016, followed by the flagship Mojave MA-1000 in October 2017. The MA-301fet makes its RECORDING debut here. We’ve made most of the original reviews available for download at www.recordingmag.com/family-compared/mojave-ma-series

Now in living color

Each MA series mic shares the same thick and heavy brass $7 \frac{5}{8}$ " X 2" body except for the MA-1000, which at $8 \frac{1}{8}$ " is taller and features stylish side vents. Originally, all models were finished in black, but now each mic sports a different color: Desert Sand for the MA-1000DS, Satin Nickel (SN) for the tube-based mics, Vintage Gray (VG) for the FET models, and black for the MA-50BK. Red Mojave badges adorn the tube models and black badges call out the solid state mics.

For this roundup, Mojave sent me four mics, with the multi-pattern MA-300 and MA-301fet representing the otherwise identical cardioid-only MA-200 and MA-201fet.

A Family of Microphones Compared

The Mojave MA Series

MA-50BK (\$599)

The MA-50 is the entry point into the Mojave family. It shares a body and cardioid-only K-67-style capsule with its 201 and 301 siblings. David Royer's goal was "clarity and realism...offering an affordable, transformerless circuit that does not sound brittle and sizzly like many low-cost competing mics."

The MA-50 is the brightest and most open-sounding mic in the family, but it's not harsh, spitty or brittle—as per David's goal. It's relatively neutral, and compared to the MA-201fet, it's more open on top and less weighted in the lows and low-mids. The MA-50 comes with an aluminum carry case and a shock mount.

In my 2016 review, I found the MA-50 did a "formidable job on drum overheads, percussion duties, piano, and acoustic guitar... It helps vocals cut nicely through a mix without being shrill or unpleasant, and it's also adept at voiceover work, with just enough proximity effect to fill out the voice nicely, but not so much as to be thick or dense... About the only source that I did not enjoy the MA-50 on was electric guitar cabinet. There, I did miss the transformer weight of the MA-201fet, or better still, the tube tone of the MA-200."

Revisiting the mic side-by-side with the other models, the MA-50 is the one I'd choose when seeking a fast, neutral, even vanilla (meant in a good way) sound that stays out of the way of the source. I also stand by my previous conclusion that the "MA-50 will be a great choice for anyone wanting an affordable sonic step up from the world of \$100 and \$200 beginner mics."



MA-201fetVG (\$799) and MA-301fetVG (\$999)



The MA-201fet and MA-301fet models also use a center-terminated K-67-style capsule—single-sided on the 201fet and dual diaphragm on the 301fet, and are designed around a Jensen audio transformer, a military grade FET, and custom-designed low-noise resistors. The MA-301fet also includes a 15dB pad and a 100 Hz 6dB/octave bass cut switch. The 201 is cardioid-only, while the 301 offers omni, cardioid and fig.-8 polar patterns. Both come with the same kit as the MA-50.

Compared to the MA-50, the MA-301fet offers more girth and punch, which I quite liked on blues-flavored guitar amps. I would call it the most

forward and aggressive of the group, making it well suited to floor tom, kick drum, bass cabinet, and electric guitar.

When Dave Martin reviewed the cardioid MA-201fet, I loved his thoughts on percussion overdubs. "The MA201fet worked great; it easily handled the high frequencies of shakers and tambourines without spittiness, distortion or other unpleasantness. A bit surprising was that the MA-201fet sounded natural enough that I could easily discern the differences between three different tambourines on playback—even in the context of a pretty busy track." Dave also liked it on kick drum, guitar amp, grand piano, and female vocals, where he reported that it offered a nice lift on the top end that wasn't harsh or shrill. That said, he found it a tad edgier than he preferred for a male baritone singer. Both Mojave FET models offer ample headroom with a clear yet wonderfully forceful weight.

MA-200SN (\$1199) and MA-300SN (\$1399)

The cardioid MA-200 started it all with the MA-300 hot on its heels, adding continuously variable pattern selection from omni to cardioid to fig.-8. The amplifier circuit is a plate-loaded design with a miniature JAN 5840 military spec vacuum tube and a Jensen output transformer.

Both mics again use the previously mentioned K-67-style capsule, and again, single-sided for the cardioid-only MA-200, and dual diaphragm in the MA-300. The MA-300 adds a 15dB pad and a 100 Hz 6dB/octave bass cut switch, and an accoutrement package that includes the appropriate power supply and multi-pin cable.

The MA-200 and MA-300 have similar low-end and mid-range plots as the x01fet models, and a generally smoother top-end presence.

My first use of the MA-300 was in a folk session with acoustic guitar, banjo, layered harmony vocals and a hybrid percussion kit. I found the MA-300 to be "an awesome banjo mic...to help those tones gel into a mix nicely." On drums and percussion, "I liked how the MA-300 highlighted the punch of the conga-like [Remo] Tubano tone and gave it a nice weight in the mix. It is also a good choice for taming tambourines and shakers. I don't normally use large diaphragm mics for hi-hat, but the MA-300 was fantastic here, highlighting the chuff, lessening the bite and gelling it warmly into the mix."

On vocals, "there were two male vocalists, both tenors. One voice was a tad brighter and a touch nasal, and the MA-300 was hands down awesome, giving said voice a solid heft in the mix without sounding dull or rolled off. On the other vocalist's voice, a tad darker and more even, the MA-300 was too blunt, and I chose a mic with more top-end air and upper-mid push."

Revisiting the MA-300, I was reminded how much I appreciate its smooth, warm, yet detailed character, especially on my Epiphone EJ-160 acoustic guitar. I also enjoyed it as a mono front-of-kit mic for adding a focused weight and presence to the drums.



A Family of Microphones Compared

The Mojave MA Series

My original review poetically summarized it best: The MA-300, “achieves its smoothness through balance. It somehow manages to be big in the low mids and full in the high end at the same time. If this were a wine, I would describe it as robust and full-bodied with a smooth finish and slightly smoky signature.”

MA-1000DS (\$2999)

The flagship MA-1000 represents the pinnacle of David Royer’s condenser designs to-date. While not an ELA M250 clone, the MA-1000 is best described as David’s vision of what he felt the 251 could or should be.

Internally, the MA-1000 also uses a NOS JAN 5840 miniature tube and a custom transformer of David’s own design and made in the USA by Coast Magnetics. It features the same pad and bass cut filter as the above models, but breaks from the pack with a new side-terminated, dual-diaphragm CK-12-style capsule hand-selected by David. Like the MA-300, it features a fully variable polar pattern selection.

It comes in a deluxe kit with a Pelican-style case containing a suede-lined wooden mic box, 7-pin Mogami mic cable, power supply, and a large-format Royer Sling-Shock shock mount.

From October 2017: “If the MA-300 was more a red wine as described above, the MA-1000 is a nice, perfectly chilled white wine with broad oaky bottom notes and a clean, balanced middle, rounded out with a gently smooth, buttery top.”



The MA-1000 is one of those classic mics that maintains its tone and fullness at one inch or five feet. It has a barely perceptible noise floor—impressive for a tube mic. It exhibits an outstanding balance of being smooth and sonically neutral but slightly richer and more weighted on the top end than an actual ELA M 251. Not better or worse, just deliciously different.

From my previous review: “From acoustic and electric guitars, male and female vocals, to room miking, solo strings and grand piano, there is no source where this mic is a bad choice... The MA-1000 does have a slightly laid-back and seated quality to it that places things in the mix, rather than making them punch through it.”

Then and now, my favorite use of the MA-1000 is on drum overheads, especially in 2-3 mic Glyn Johns setups. During my 2017 review, I tracked the indie artist Earlyface, who wanted the drums (a four-piece kit with a 16” kick) to have a classic 50s jazz feel. You can hear the results, with a pair of MA-1000 mics in action as described above at <https://earlyface.bandcamp.com>

Part of the magic of the MA-1000 is setting up the mic and then dialing in the sound and focus to taste with the variable pattern control (This applies with the MA-300 as well).

Again, my previous conclusion stands: The MA-1000 is a “seriously boutique-level mic, with a seriously boutique-level sound. It not only goes toe to toe with many of the classics... someday it may well be considered a classic in its own right.”

Conclusions

Mojave Audio has done a great job of crafting microphones from the entry level to the boutique, with four flavors that nod toward the classics, and each with its own voice. Hopefully, this roundup will help you pick the best choice for your needs. ➤

More From: mojaveaudio.com

	MA-50BK	MA-200/201	MA-300/301	MA-1000
Frequency Range	20 Hz–20 kHz (±3 dB)	20 Hz–20 kHz (±3 dB)	20 Hz–20 kHz (±3 dB)	20 Hz–20 kHz (±3 dB)
Diaphragm	3-micron 1" gold-sputtered Single-sided	3-micron 1" gold-sputtered Single-sided	3-micron 1" gold-sputtered Dual-sided	3-micron 1" gold-sputtered Dual-sided
Sensitivity	-40dB (1V/pa)	-39dB (1V/pa)	-39dB (1V/pa)	Omn: -37.5dB (1V/pa) Cardioid: -36.0dB (1V/pa) Figure-8 -34.0dB (1V/pa)
Self Noise	Better than 16dB (A)	14dB nominal, not to exceed 16dB (A)	14dB nominal, not to exceed 16dB (A)	14dB nominal, not to exceed 16dB (A)
Max SPL	125dB	125dB	120dB/135dB with pad	120dB/135dB with pad
Distortion	<0.5% @140dB SPL	<1% @120dB SPL, <3% @134dB SPL	<1% @ 117dB SPL <3% @ 125dB SPL <1% @ 132dB SPL <3% @ 140dB SPL with pad	<1% @ 117dB SPL <3% @ 125dB SPL <1% @ 132dB SPL <3% @ 140dB SPL with pad
Dimensions & Weight	7 5/8" X 2" 1 lb.	7 5/8" X 2" 1 lb.	7 5/8" X 2" 1 lb.	8 1/8" X 2" 1 lb.
Accessories	Carrying case with microphone, shock mount	Carrying case with microphone, shock mount	Carrying case with microphone, aluminum storage box, power supply, shock mount and cables	Deluxe carrying case with microphone, wood storage box, power supply, Sling-Shock and cables