

Recording Fundamentals: What Makes A Recording "Good"?

# RECORDING

The magazine for the recording musician

## How To Make Great Drum Tracks

Handy Tips From Master Players  
Classic Drum Tracks: How Did They Do It?  
Make The Most Of The Mics You Have



## 2011 AES Convention Report



### 8 Products Reviewed:

Mojave Audio MA-300 tube mic • Neumann KH 120 monitors  
Arturia Analog Experience: The Laboratory 49  
and iOS analog modeling synths from Korg,  
Moog, Tempo Rubato, VirSyn, and Way Out Ware

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# REVIEW



I like to think of Mojave Audio as “David Royer’s other microphone company”—the outlet for all of his non-ribbon fare. The Mojave line currently includes a pair of large-diaphragm condensers—the original MA-200 tube mic (reviewed January 2007) and the solid-state MA-201 fet (December 2009)—as well as a pair of pencil condensers, the vacuum tube model MA-100 (May 2008) and its solid-state counterpart, the MA-101 fet (July 2010).

The cardioid-patterned MA-200 was the first mic in the line, and since its creation it has gained a very solid following. On the web, it usually pops up in “What’s a good U67 clone/replacement” threads. While it isn’t intended to be a full-on U67 clone, it does share similar sonic characteristics, qualities and favored uses. Mojave’s brand new MA-300 is essentially a multi-patterned version of the 200, with a handful of additional new features.

## Details, details

The pickup pattern is continuously variable, from omnidirectional to figure-8. Also new: A 15 dB pad, and a switchable hi-pass/bass roll off (–6 dB/octave below 100 Hz).

The MA-300 uses a dual back plate, center-terminated K67 style capsule with a 1” dual sputtered, 3-micron thick dual diaphragm. The MA-300’s amplifier circuit is a plate-loaded design that, like the MA-200, uses a miniature JAN 5840 military-spec vacuum tube and a Jensen output transformer.

The MA-300 is decked out in Mojave’s standard black body with silver sloped grille and head basket. Other than the new rear-mounted switches, slight resizing of the logo and text, and the loss of the MA-200’s cardioid symbol on its head basket, the MA-200 and 300 could be identical twins.

Although these mics are of Chinese origin I was instantly impressed with the construction of the MA-300. Its 1 lb., 7<sup>5</sup>/<sub>8</sub>” body

## Mojave Audio MA-300

### Multi-Pattern Tube Condenser Microphone

A yummy and versatile new mic expands your palette of options—on drums and more

is solid, well put together and very classy in its overall appearance and presentation. The MA-300 comes with a shock mount, power supply (with an externally switchable voltage selector), multi-pin cable, AC cable, and an individual mic flight case, all housed in a small briefcase-sized aluminum carrying case.

## Specs

Like most modern mics, the MA-300 has a 20 Hz to 20 kHz frequency response. Sensitivity is listed as –37 dB re 1V/Pa, maximum SPL is given as 120 dB (135 dB padded).

The factory frequency graphs show the MA-300 in omni and cardioid to have a rising low-mid section that peaks very smoothly up to +7 dB around 100–200Hz. It scoops back down to 0

dB around 1 kHz, and then rises gently and evenly back up again about +5 dB all the way to about 18 kHz, a bit higher in omni than in cardioid.

In figure-8 it follows the same overall outline but rising less in the low mids and even less at the high end, making figure-8 the darkest of the three patterns, which is typical of most multi-pattern microphones.

These graphs show that, with the exception of the 1k dip, this is a smooth yet big sounding mic, and most significantly this mic lacks the high-mid spike common to most modern (especially Asian) mics. Of course data and graphs only tell a fraction of the story; it’s how the mic captures sound and what type of sonic signature it imparts that is most important. So—to the studio we go!

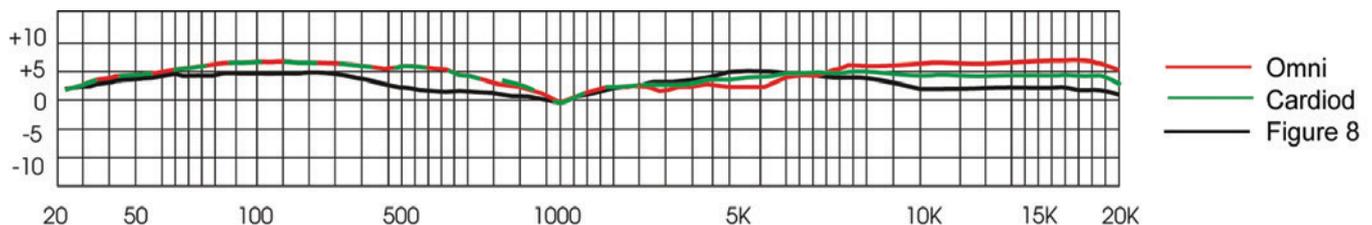
## The MA-300 in session

I received and immediately began using the MA-300 at the beginning of a folk session with acoustic guitar, banjo, layered harmony vocals and a hybrid percussion kit consisting of a set of Remo Tubanos (a cross between congas and a djembe), hi-hat, tambourine and shakers. I also tried it on drum overheads on a 5-piece rock drum kit and on a voiceover session.

For reference I compared the MA-300 to a pair of multi-pattern tube mics in my collection, a Peluso 2247LE and a Telefunken AR-51 (reviewed November 2010). Overall it was the thickest sounding mic

of the three, and pretty much the antithesis of the very open and airy AR-51. This held true in all three patterns, with the figure-8 being somewhat darker than the others, of course. Stylistically it was closer in its sonic signature to the 2247, but still overall fuller and less mid-forward.

For the application examples described below, the selected pattern was all cardioid, except for the shaker and tambourine overdubs—where I like omni since the source moves a lot. I tried figure-8 in front of the drum kit during testing, but ended up back with cardioid because I wanted a tighter, less roomy sound. I tend to only use figure-8 for group backing vocals, or drum overheads/front-of-kit when I want to add in the depth of the room, most of the time, or if I am doing M/S recording.



## Guitar and banjo

In my comparisons with the Telefunken and the Peluso, each mic had its strengths on acoustic guitar; the AR-51 made it sound the most natural and unassuming, the 2247 was more mid-forward and aggressive, while the MA-300 was the most imposing in a warm and pleasant way. This makes the MA-300 a perfect choice for the current trend of gritty and thick Americana-folk style music, the likes of Ray LaMontagne and T-Bone Burnett.

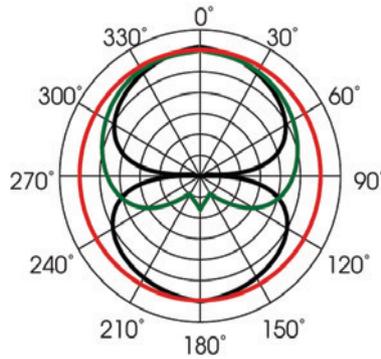
This is an awesome banjo mic—seriously. Banjos have a very thin, metallic, ringy sound to them and the MA-300 is a great mic to help those tones gel into a mix nicely.

## Percussion and drum kit

Although it lacked the openness of the AR-51, I liked how the MA-300 highlighted the punch of the conga-like 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.

This of course is a matter of taste and may not be the best choice if you want a natural or brighter tone for your metallic percussion needs—then an uncolored FET mic or the AR-51 would be the way to go.

Listening to the MA-300 on drum overheads, my feelings are similar to how the mic



performed on percussion. As an overhead mic it nicely tames harsh cymbal play, but may not be crisp enough as an overhead mic for many modern music styles. It does well as a mono front-of-kit mic, and while I only had one for review, I can make the educated guess that these would make great mics for the vintage Glyn Johns style drum set discussed elsewhere in this issue, especially if you want a warm, meaty coherent kit sound.

## Voice

Like most mics, this mic is a mixed bag for voice. On the song I tracked 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.

As a voiceover mic my experience was similar—on the right voice it was instant radio announcer, but if the talent has an even, deep or monotone voice, you may want a mic with a touch of hype, and that word is not one that describes the MA-300.

## Conclusions

The MA-300 is neither typically dark, or bright, or even "neutral". It 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.

What I enjoyed the most about the MA-300 is that somehow it manages to have a sound unlike most anything else on today's really crowded microphone market, especially in this price range. While I often complain about modern mics that try too hard to sound "vintage" and dark, the MA-300 manages to avoid that trap, and yet it squarely conveys the sound that most of us mean when we use the word "tube" as a descriptive. ➤

**Price: \$1295**

**More from: Mojave Audio,  
[www.mojaveaudio.com](http://www.mojaveaudio.com)**