review

ADK S-7 and A-6 MICROPHONES

Siblings with unique talents

BY JUSTIN PEACOCK

Can you really be impressed by an inexpensive mic? Nowadays, you can cough up somewhere in the *tens* of dollars and get yourself a large-diaphragm condenser microphone. It's in that $200–$300 territory, however, that many musicians are willing to go. Cut down on your daily dose of grande double mocha cappuccino and you'll have a new microphone in a couple of months, easy!

But, you did sacrifice a delicious daily drink, so whatever mic you buy had better be good in return. So what mic are you going to buy? Well, if you were me, you'd buy an ADK A-6, or maybe an S-7. And here's why...

S-7 and A-6: comparing specs

The S-7 is a short and stout large-diaphragm condenser with a cardioid polar pattern. It has a transformerless circuit and a newly designed electronics package. The mic sports a low self-noise spec of 15 dBA, a S/N ratio of 79 dBA and a sensitivity of 12 mv/Pa. The SPL handling of this mic, however, is the real shining spec. It has a two-position pad with –8 dB and –18 dB cuts. At 0.5% THD, the mic can handle 132 dB unpadded, up to 150 dB with the maximum pad!

The A-6 is also a cardioid condenser microphone, but of a very different design than the S7. It has no switches, keeping in mind a "purist" audio path, yet does feature an output transformer to help provide good body to the tone. The A6 has a sensitivity of 13 mv/Pa, S/N ratio of 79 dBA, self-noise of 15 dBA and can handle 131 dB SPL for 0.5% THD.

Coming to the realization...

Okay, so you're probably wondering why I'm reviewing these mics simultaneously. At first look, I thought they'd be apples and oranges—totally different. One mic has a transformer, is tall, skinny and has a silver grille; the other has no transformer, is short and stout and all black. They must be totally different mics, right?

After using them on some sessions, it wasn't clear how they were different, so I compared them side-by-side on voice. Wow—these aren't apples and oranges at all. Rather, they're a couple of distinct apple varieties. Like Gala and Granny Smith.

It turns out the A-6 and S-7 share the same capsule, but the bodies and electronics are totally different. This is quite cool, as both mics are useful and sound great, but have different features for different applications (more on this in a moment).

A word about frequency response

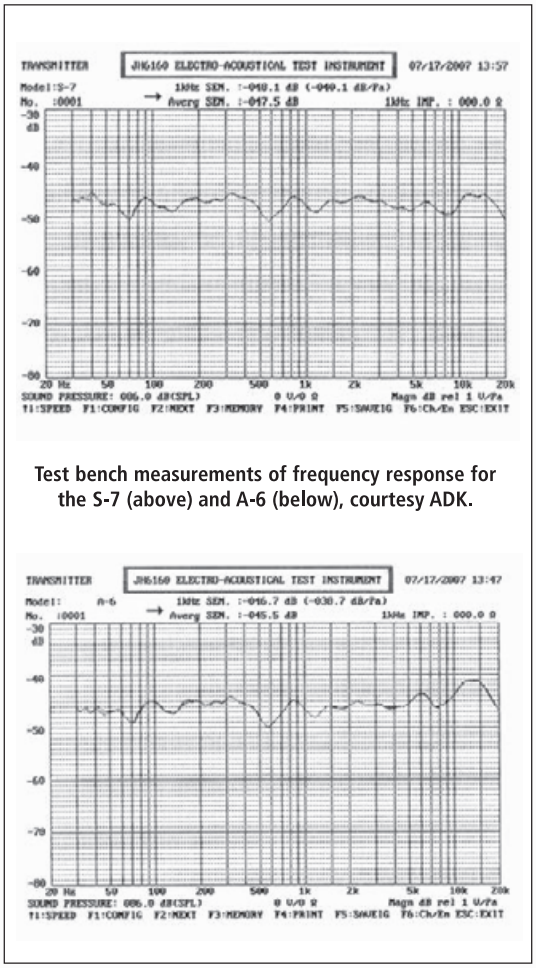
By now you may have taken a moment to examine the frequency response plots included with this article, and if you're new to learning about and purchasing microphones, you may be surprised or even worried at all the little bumps and dips you're seeing. After all, the response plots that get published for most other microphones don't have all those little anomalies, do they? They're so nice and smooth, with gentlemanly rises and falls... what's the deal here?

The deal is, what you're seeing on this page is a set of actual response plots measured on the test bench and provided

to us by ADK, showing the unvarnished truth about these mics' responses, not a carefully smoothed graph that hides the small bumps.

If it were up to us, all manufacturers would provide *both* types of plots. The smoothed plots, which average out response over a wide range of frequencies to even out all the little bumps, are excellent for taking in the overall behavior of a mic at a glance: "This mic is very flat until you get to a bump above 6 kHz" or "That mic has emphasis in the low mids". But if you want to know what's going on under the hood, where there are resonances or peaky areas that require attention, you need a real test plot, and most mic makers simply don't make those available because they can confuse and frighten mic neophytes... or can show up design deficiencies the maker would rather stayed hidden from view.

I was very happy to see these measured plots; it shows courage on ADK's part to publish them against the trend of smoothed graphs, and I was able to learn a lot about how these mics could be expected to behave. In particular, I want to point out one feature—a notably boosted treble response in the A-6 vs. the S-7. While the mics have very similar responses in the range around 1 kHz–5 kHz, the boosted treble in the A-6 makes this range sound less forward, while in the S-7 it's perceived as a slightly more muscular midrange. Listening tests bore out this difference in behavior perfectly.



Test bench measurements of frequency response for the S-7 (above) and A-6 (below), courtesy ADK.

In use

By a happy accident I started off the review period with a pair of S-7s for a short time (a second S-7 was initially provided instead of an A-6). Without any idea of what they sounded like, I started out using them as drum overheads. Compared to my tried and true AKG C451s—which I *love* on drum overheads—the S-7s were sweet! More than any other mic around the studio (and I have many) I would definitely use them here. Their lift characteristics were just right and not too bright. Also, the width of the pattern was just right. So many inexpensive mics have really wide or really narrow patterns. The result is either way too much room sound (too wide) or a really focused sound that doesn't balance the cymbals well (too narrow). Not the case here—the S-7s sounded awesome.

In later tests, with a single A-6 and a single S-7, I tried these mics on acoustic guitars, guitar amps, vocals and piano in addition to my usual tapping, key jangling and the like.

The A-6 was really sweet on acoustic guitar. My partner Dave and I recorded Rob Eldridge, a busy gigging guitarist in Denver. He had written some short solo pieces for a documentary, and we recorded them with a Mid-Side setup. The A-6 (as a Mid mic) delivered a fantastic sound quality, comparable to several other very expensive microphones. Had it been my only option for this session I would have been happy. I paired the A-6 with my Chandler Germanium preamp in this situation, and the result had a great combination of fidelity and warmth.

Another highlight was the S-7 on electric guitar amps. In combination with a ribbon or dynamic, I got an awesome combination of full tone and high frequency extension. Plus, this mic has no problem dealing with a big amp cranked up.

But the test I *really* have to tell you about is the piano! We have a Kawai grand that, for whatever reason, is a very mellow piano. Microtech Gefell M300s, which are usually really sweet on piano, are just too easy-going for this particular instrument. We're usually cutting pop/rock tracks and need a brighter sound to cut through the mix. So, I thought I'd throw up the ADKs and see what they could do. By this point I only had one of each model, so I put the S-7 on the low end and the A-6 on the top...

Holy cow. Dave, the real piano-playing half of our production team, was instantly blown away. He's always bothering me about tweaking the piano sound and this was instantly it. Thumbs up to these mics' open top end and smooth middle.

As they continued to be sweet performers in many areas, I started to wrap my brain around the sonic differences between the two mics. Basically, I found the A-6 with its output transformer to be nice and open on the top, with a nice roundness in the mids. It's not as forward in the low mids as my TLM 103, but still very well balanced.

The S-7, on the other hand, has no transformer. This, in combination with the different housing, made the mids just a hair more aggressive and up front than the A-6. It's not brighter or harsher, just a touch more forward and articulate....behavior that was predicted in the measured plots provided by ADK!

Final thoughts

Okay, I'm impressed. I honestly didn't expect such a mature sound from a microphone in this price range. Both the A-6 and S-7 are very worthwhile additions to a studio, earning great marks in the "value for dollar" category.

Which one you get depends largely on your needs and applications. If you record a lot of loud guitars and drums, the high SPL handling of the S-7 is for you. If you're doing more acoustic music, check out the A-6. Either way I think you'll be mighty happy that you gave up those grande double mocha cappuccinos.

Prices: A-6, $249; S-7, $299 (estimated street prices)

More from: ADK, 41309 SW 117th Ave., Suite 442, Beaverton, OR 97005. 503/296-9400, www.adkmic.com.