

# Audio-Technica AT4080 / AT4081

Ribbon renaissance man **JON THORNTON** picks up the microphone trail with Audio-Technica's newest bidirectional active designs.

The ribbon renaissance continues apace as another mainstream manufacturer adds to its product line with a new pair of ribbon microphone designs. Hot on the heels of Shure, whose latest KSM ribbons are the result of the acquisition of Crowley and Tripp, Japanese manufacturer Audio-Technica has taken a different approach by designing and building its own brand-new bidirectional ribbons from scratch. The AT4080 and AT4081 are the result — fig-8 ribbons with active circuitry, but with very different form factors and, somewhat surprisingly, quite different sonic characteristics.

In producing a ribbon microphone today, it seems that you also need to add some form of proprietary USP — witness the unearthly sounding 'Roswellite' material used in the Crowley and Tripp/Shure range, or the Neve-designed active circuitry in SE Electronics' RNR1. Audio-Technica is no exception, claiming 18 patents pending for its new microphones, including a proprietary 'MicroLinear' ribbon imprint, which aims to minimise ribbon distortion and increase durability of what has long been perceived to be a fundamentally fragile microphone type.

The AT4080 and AT4081 are built around dual ribbon motors, a technique that has been used by Beyerdynamic for many years in its ribbon designs. The aim here is to improve sensitivity and signal-to-noise ratios, though the two microphones differ in their published specs in this regard with the AT4081 giving 7.9mV/Pa and the AT4080 11.2mV/Pa. The difference is apparently due to a larger output transformer employed in the AT4080.

There is obviously a good deal more room in the AT4080, whose form factor is similar to most side-address large-diaphragm capacitors. The AT4081, on the other hand, is much more svelte in appearance, more closely resembling a stick microphone, though this, too, is, in fact, a side-addressed design.

Build quality is, as expected from Audio Technica, very good indeed, and production is hand-assembled from ribbon corrugation and

imprint to final assembly. The AT4080 ships with a suspension mount and the AT4081 with a fixed clip. Each microphone requires phantom power to operate, as is becoming common with new ribbon designs due to the inclusion of some preamp-friendly active electronics.

Male vocals were first on the testing agenda, and it quickly became clear that physical appearance is not the only difference between these two microphones. First impressions are that the AT4080 sounds most like my preconceptions of how a ribbon should sound — no hint of harshness in the high end, but instead a nice HF roll-off, coupled with an incredibly full-sounding low end that sustains its solidity, even at quite significant working distances. Male vocals that need some thickening up benefit greatly from this, though the effect can quickly become very overblown on naturally thick voices.

By comparison, the AT4081 sounds slightly thin on first audition, but closer listening reveals it to be the more neutral of the two. This was much more evident when moving to recording solo trumpet, with both microphones just slightly to one side of the bell and angled in, at a distance of about 50cm or so. While the AT4080 delivers plenty of low down 'oomph', this is coupled with a slight lack of articulation in the higher harmonics. In short, it sounds as if it's trying a little too hard. The AT4081 is much smoother in this regard, and delivers a lot more detail without sounding overly harsh.

Moving on to electric guitar — another favourite application for ribbons — and this time the two Audio-Technica offerings were joined by what must be seen as one of their main competitors, the Royer R-122. Here the AT4080's pronounced LF tip-up was extremely evident, and in this application only really served

to muddy the sound rather than add weight. The Audio-Technicas responded well to some fine tuning by rotating them slightly off axis, though, unlike the Royer, they seem to be very consistent in terms of frequency response on front and rear lobes. In some situations this is a real strength in a ribbon, but in this application I like the versatility that the Royer has in having slightly more 'bite' to its rear pick-up. All three ribbons turned in respectable performances here, though the AT4080's LF bump was starting to become slightly overwhelming at times. Given that the ribbons themselves seem to be identical in both Audio-Technica microphones, I can only guess that this difference is due to differences in the enclosure and/or the electronics or transformers used.

To confirm another apparent characteristic of the Audio-Technica microphones, all three ribbons were tasked as a single drum overhead (actually, more about a metre in front of the kit, angled downwards). While it wouldn't be fair to describe the sound of any of the three microphones as being harsh, the Audio-Technica ribbons had a slight hardness to the mid frequencies that wasn't really apparent with the Royer. In some applications this isn't necessarily a bad thing — certainly when working at a distance it gives these microphones a clarity to transients that you would normally associate with a capacitor microphone, but coupled with the overall smoothness and HF roll-off of a ribbon. However, for out and out smoothness — particularly close to source, this characteristic might not be to everybody's taste.

Yet all of this needs putting in the context of Audio-Technica's chosen price points. With a retail price of UK£890 (including VAT) for the AT4080, and UK£690 (including VAT) for the more neutral-sounding AT4081, you could acquire a pair of AT4081s for the same price as a single R-122. Of course, with this you're buying into bulletproof build quality and a very versatile pair of ribbons that wouldn't disgrace any microphone cupboard. ■



## PROS

Build quality; price; very detailed at distance; AT4081 very neutral.

## CONS

AT4080 may have a little too much LF tip for some; may sound a tad hard in some applications compared with the competition.

## EXTRAS

Also new to the 40 Series, the AT4050ST is a stereo version of the AT4050. The new mic has a pair of elements positioned at 90° to each other in a Mid-Side set-up, with one element in cardioid and the other configured as fig-8. The AT4050ST allows for different output options, namely M/S, Stereo 90° and Stereo 126°.



The AT4047MP is a multipattern version of the AT4047SV. It has the same element as the 4047SV but offers omni and fig-8 patterns in addition to the cardioid.

## Contact

AUDIO-TECHNICA, JAPAN:  
Website: [www.audio-technica.com](http://www.audio-technica.com)