

Aston Stealth

Dynamic Microphone

Aston's capacitor mics are fast becoming popular in the studio, and with its four voicing options and built-in preamp, their first ever dynamic model looks set to follow suit!

HUGH ROBJOHN'S

British manufacturers Aston Microphones have quickly established a loyal following for their modest but impressive product portfolio of high-quality capacitor mics and accessories. Pretty much all of their products have some interestingly quirky and individual features, such as the waveform-style spring head of the Origin and Spirit mics, or the laser pointer and sintered windshield on the Starlight. The latest offering from this innovative and imaginative company continues that trend with another unexpected 'industry first'.

Aston Microphones have always valued and relied upon customer and industry feedback to guide the development of their microphones, particularly in terms of sound character and features. And it was as a direct result of industry feedback that the company decided that their fourth microphone was to be something completely different from previous models: a dynamic microphone — and a great big one at that!

Called the Stealth, this new microphone is quite a beast, measuring 196mm in length and 58mm in diameter, and weighing a substantial 695g. The most immediately comparable mics that spring to mind are models like the Shure SM7B, the Rode Procaster and the Electro-Voice RE20.

Like these other models, the Stealth is an end-fire, cardioid, moving-coil dynamic microphone. It took around nine months to develop, much of that time being spent on extensive testing in the field. Aston recruited a panel of 92 engineers and artists, who started by shortlisting potential dynamic capsules, before moving on to compare and optimise different mic 'voicings' using 14 different voices and seven other reference



sources, all in a double-blind test format to ensure objectivity. The resulting data amounted to something like 9000 test points that revealed some very strong and consistent preferences, which shaped the production microphone.

Rhythm & Stealth

Painted in a silky black, the plain metal body carries the Aston logo and the mic's name, but is topped by five black plastic rings, which create an attractive milled effect while also providing sound access to the rear ports of the capsule to enable its cardioid polar pattern. The top ring is thickest at about 32mm, while the middle three are 6mm deep and the last just 3mm. These top rings are partially mirrored with two more 6mm rings at the bottom, which gives a nice visual balance. At the business end of the microphone, a 6mm-thick black acoustic foam pop screen is removable for cleaning, and sits across the top of the capsule on a three-spoked plastic web.

Below this is a wire mesh cage to further protect the 25mm diaphragm from plosive blasts.

The moving-coil capsule inside this cage is supported in an integral shockmount that connects to the mic body via three Sorbothane mounts, while a 200g ballast attached to the capsule provides mass-loading to optimise the performance of the suspension. Unlike many dynamic mics in this class, the Stealth mic doesn't feature a conventional humbucking coil to minimise audible hum picked up from strong magnetic fields, but Aston's Managing Director James Young tells me there is a form of anti-hum circuitry built into the mic's internal circuit board.

I've already mentioned the two plastic rings at the bottom of the microphone, and the lowest one is a kind of end cap that protects the output XLR connector and a small button on the base. There is also a slot here for the removable standmount, which is basically a flat 4mm-thick bar attached to the knuckle of a threaded 5/8-inch threaded stand adaptor. The bar is shaped a little like a flattened jack plug, with a rounded tip above a slightly narrowed waist, and this is simply pushed firmly inserted into the slot until it clicks securely in place, allowing the mic to be suspended upside down if necessary (removal of the mount just requires a firm tug).

The upper of the two base rings isn't just decorative, but serves as a rotary switch. To that end it carries the markings V1, V2, G and D, any of which can be aligned with a white reference line. These markings refer to four different tonal voicing options, optimised through the industry panel's listening tests. The options are two different vocal tones, a response tuned for acoustic guitars, and a darker tone reminiscent of a ribbon mic.

There are, of course, a few other dynamic microphones around with selectable frequency responses, some offering voice/music options and others adjustable bass responses, for example. However, this degree of tonal flexibility is unusual, and the only other dynamic mic I can think of that matched it was the old Electro-Voice 668. This forerunner

This new microphone sets a very high bar for sound quality..."

of the famous RE20 had a complex 'programming panel' that offered comprehensive control over the frequency response.

The ability to select four different voicings will be attractive to many potential customers, I'm sure, but what may appeal even more is the Stealth's secret weapon: a built-in Class-A gain stage. Again, other manufacturers offer dynamic mics with integral phantom-powered buffers and gain stages, but what makes Aston's offering genuinely unique is some clever circuitry that bypasses the gain stage if phantom power is not detected, allowing it to be used as a conventional passive mic.

Let There Be Light

Without phantom power the Stealth works just like any other dynamic microphone — albeit with the selectable voicing options as described above — and has the typically low sensitivity of an ordinary passive moving-coil microphone. But if 48V phantom power is present on the connecting cable, the microphone automatically activates its internal gain stage, boosting both the effective sensitivity and the output level massively.

In this active mode, purple LEDs illuminate in the slot below the rotary switch, although these can be disabled by that button in the base of the mic,

if preferred. This seems an odd feature to me: Aston believe that some people would want to disable the lights to avoid drawing attention to the mic. but it seems to me that the Stealth is so big that few would miss it anyway! I would have preferred the ability to disable the internal amplifier, because many budget mixers provide phantom on all channels, and I can envisage situations — such as miking a guitar amp — where you'd want to use it in passive mode even with phantom connected.

Stealth Mode

The Stealth is a pretty chunky microphone that looks serious and professional, and sits confidently alongside the established end-fire dynamics like the SM7B, RE20 and Procaster. And when powered, the purple LEDs add a distinctive and elegant charm that marks the Stealth out as something special.

Although it's simple and reliable to insert and remove, and looks very neat in use,

I wasn't entirely confident about the standmounting adaptor. This mechanical arrangement means the heavy microphone creates a massive amount of torque at the knuckle setting the mic's angle from the stand. Consequently, if the mount isn't fitted the right way up it tends to slip and droop regardless of how it is tightened, and when fitted the right way up it self-tightens and can become difficult to adjust, even though the thumb-nut is fairly »

Aston Stealth £299

PROS

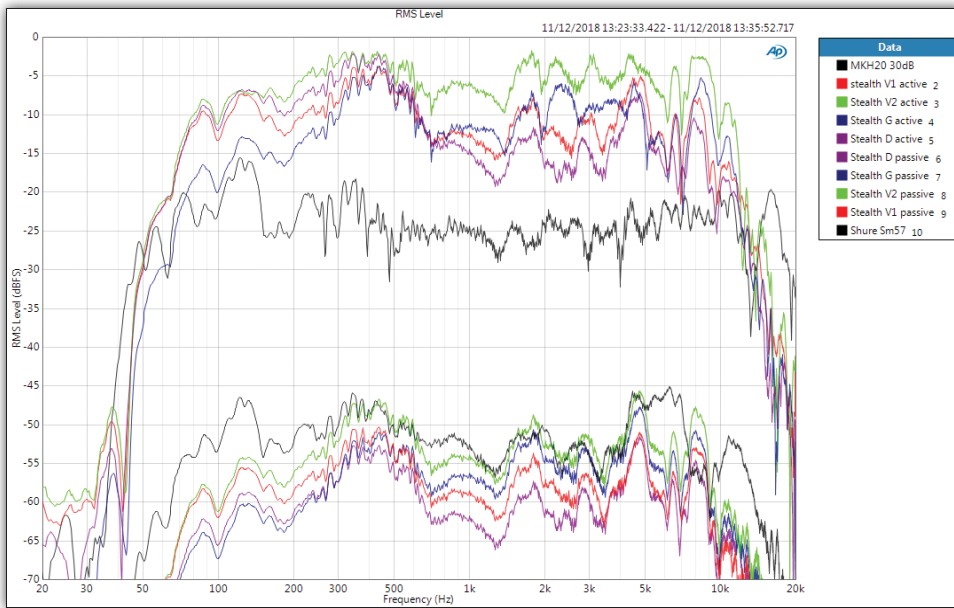
- A well-made and substantial end-fire cardioid dynamic microphone.
- Four selectable voicing options.
- Usable as either a conventional passive dynamic mic, or as an active high-output mic.
- Class-A gain stage, which is activated automatically when phantom power is detected.
- A lot of mic for the money!

CONS

- The standmount could be better-designed to make it easier and more reliable to use.

SUMMARY

Like other Aston microphones, the Stealth introduces some useful twists with four selectable voicings and a built-in gain stage to boost the output automatically whenever phantom power is present.



The Stealth's four different voicing modes are accessed using a rotary switch at the base of the mic.

the need and expense of an external cascade preamp such as a Cloudlifter or FetHead.

However, whereas most cascade preamps introduce around 25dB of gain, the Stealth's active mode boosts the signal by a colossal 50dB — meaning this thing can produce almost a line-level output when presented with a loud source! Aston quote the nominal sensitivity in the active mode as 150mV/Pa, which is a lot, but again there is a variation of 8dB or so depending on the tone setting. For comparison, a high-output capacitor mic, like

the Sennheiser MKH40, is typically around 25mV/Pa, so the active Stealth is between 12 and 18dB louder than that!

Despite the unusually high sensitivity, though, the mic's self-noise isn't a problem in the active mode, and the specifications claim a respectable figure of 10dBA, while the maximum SPL is 140dB for 0.5 percent distortion, which is equally impressive.

Impressions

Aston like to innovate with their mics, and the new Stealth — as the company's first dynamic mic — is no exception. This new microphone sets a very high bar for sound quality, the build quality is excellent, and the form factor sits well with its intended peers. I like the purple LEDs in active mode too. I'm less enamoured of the standmount arrangements, but perhaps a more traditional cradle mount will be forthcoming. In the meantime, for anyone wanting to use the Stealth in a broadcast or podcast-type application, there are third-party suspension options that would allow a better balance on the traditional adjustable lever-arm desktop stand. Nevertheless, the Stealth's four selectable tonal options make this mic unusually versatile, and the active mode could prove very useful in some situations. **///**

» large. It's not a disaster by any means, but I found myself having to re-tighten a drooping mic more than once.

The rotary voicing switch is simple to use but feels solid and secure, and is unlikely to change position accidentally during normal mic handling. The four positions offer quite obviously different voicings which should suit a wide range of applications. Although the labelling suggests the first two are optimised for vocals, there's no reason not to try the others as well, of course, and if the resulting sound works in the context of a specific track, who's going to complain?

I found the V1 position to have a fair amount of lower-mid weight and depth, but with good diction and clarity in the presence region, and it wasn't a million miles away from the character associated with the classic Shure SM7B. In contrast, the V2 position was noticeably louder and gave a much more mid-forward and brilliant sound with a lot more in the 10kHz area, making it sound more like a large-diaphragm capacitor mic and almost U87-esque. Every voice is different, of course, but one or other of these two options is likely to complement most voices pretty nicely.

The G position is apparently tuned for acoustic guitars, and it has a crisp quality

for percussive clarity with a diminished bass end to minimise muddiness, and the overall balance does work very well in that context. Lastly, the D option has a distinctly mellow tonality with a strong bass end (sitting halfway between the two V modes) and a gently recessed mid-range with a rounded high end. The general character is quite reminiscent of a vintage ribbon, and I found that worked rather nicely on guitar amps (and the bass rotor of my Leslie cabinet), although it might seem a bit dull to some ears.

Using the mic as a conventional passive dynamic works exactly as might be expected, and its sensitivity is absolutely fine when working close to loud instruments like electric guitar amps and strong vocals. Aston have specified the nominal sensitivity as 1mV/Pa, but actually it varies over an 8dB range depending on the tone setting. The D mode is the least sensitive at around 0.5mV/Pa, while the V2 setting is strongest at 1.4mV/Pa, with the V1 and G modes in between. For comparison, the Shure SM7B has a sensitivity of 1.12mV/Pa and an SM57 is 1.6mV, so the output level from the Stealth is in the same ball park, but tending to be a little lower in some settings.

When working with quiet sources, though, like gentle acoustic guitar or spoken word, the Stealth has the ability to boost the output considerably simply by turning on phantom power — and that's really handy, particularly when partnered with interfaces or preamps with only a modest gain range. It also avoids

Alternatives

The Stealth's most obvious competition comes in the form of the **Shure SM7B**, the **Procaster** and the **RE20**, but none of these alternatives can match the versatility of the Aston microphone.

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