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The words 'ribbon microphone' conjure up the titans of the mono age: the Coles 4038, BBC Marconi Type A, Melodium M42B and, perhaps most iconically, the RCA 44. But there were also many smaller, more humble designs that found their way into the hands of home recording enthusiasts and small-time PA operators. In the UK alone, manufacturers such as Reslo, Grampian, Film Industries, Cadenza and Selmer produced countless ribbon mics

# Extinct Audio BoRbon

## Ribbon Microphone

It might not look like a classic ribbon mic, but there's a lot more to Extinct Audio's BoRbon than meets the eye.

of varying cost and quality.

There's probably no-one alive who knows more about these vintage British ribbons than Stewart Tavener of Xaudia. As well as repairing thousands of them, he's developed a standard set of upgrades for the popular Reslo RB mics, based on an old BBC research paper. Having also

accumulated a pile of spare

bodies and grilles from unrepairable mics, he began to wonder whether there might be mileage in retrofitting new ribbon motors into these shells to get them going again.

Stewart already made ribbon motors as part of his other business, Extinct Audio, but Extinct's existing BM9 microphone is a so-called 'long ribbon' design, and its motor would be too large to fit into Reslos and other antique British models. Consequently, a new 'short ribbon' motor was developed, and this turned out to perform so well in testing that the idea of using it as the basis for a new Extinct model took root.

### The BoRbon Dynasty

Although the BM9 is very competitively priced for an entirely British-made

microphone, it's still a big investment for many home studio owners. That's par for the course for mics made in Western or high-wage economies, and models such as the beyerdynamic M 130, Coles 4030L, Audio-Technica AT4080 and Rode NTR are all comparable in price. If your budget won't stretch that far, there are impressive 'boutique' offerings from Hohm and Alder Audio that come in a couple of hundred cheaper, but they have to be ordered from Australia and the USA respectively. Below that, you're looking at Chinese-made mics, which are mostly based around one or two generic designs, and don't always offer the same levels of quality or consistency. With their new mic, Stewart and his team at Extinct Audio wanted to see if they could find a way to rival these imports for affordability.

### Extinct Audio BoRbon £425

#### PROS

- The sound of a classic long-ribbon microphone in a small, lightweight package.
- Unique looks.
- Remarkably affordable for a UK-made mic.

#### CONS

- Figure-8 pattern isn't perfectly symmetrical.

#### SUMMARY

Looks a bit like a biscuit. Sounds remarkably like an RCA 44!



One of the major factors in the cost of microphones is the bodywork. Casting and finishing precisely shaped metal shells is an unavoidably expensive business. Some mic manufacturers have reduced costs by outsourcing this work overseas and keeping the more important stuff in-house, but Extinct didn't want to go down that route. Instead, they came up with an impressive piece of lateral thinking. They were already using a local laser-cutting company to etch the Extinct logos into wooden boxes for the BM9. What if the microphone itself could be made from wood rather than metal?

The first prototype convinced them that the idea would work, and the result is the BoRbon, so-called either because it's a 'beau ribbon', or because it looks a bit like a Bourbon biscuit. I don't know that you'd bite into one by mistake, but in the flesh, it certainly resembles a food item more closely than it does any other mic. The look and feel are utterly unique: in essence, the body is built up from five layers of laser-cut ply, sandwiched between shiny plastic faceplates. Three pairs of machine screws run all the way through the body. The top two pairs pass through the corners of the ribbon motor, holding it in place inside the wooden frame, while the larger pair at the bottom attach an external right-angle XLR connector. The review mics were finished in a very classy tortoiseshell, but a bonus of this construction method is that Extinct can offer custom colours and designs. At the time of writing, for example, they're offering a fetching gold flake version as a limited edition.

As well as the potential for customisation, the BoRbon design has several other benefits. First, it's incredibly compact. Of the other ribbon mics in production today, only the beyerdynamic M 130 is comparable in size; the BoRbon is wider and deeper than the M 130, but is even shorter. Second, you can place two of them in close proximity without having them jump towards one another. Both of these factors are plus points for stereo use, allowing you to easily arrange two BoRbons in a truly coincident arrangement. Third, it weighs very little. This is good, because its unusual design means that conventional mic clips won't accommodate it. Manufacturing a custom shockmount would have pushed the price up,

## Mount-A-Mic Mk2

Under his Xaudia brand, Stewart Tavener created the Mount-A-Mic back in 2015. The original version is a metal barrel that has a female XLR connector at one end and a 5/8-inch threaded socket at the other, with the mic cable emerging from a hole in the side. It's a simple, effective and compact way of attaching a mic to a stand in circumstances where you don't need shockmounting and you're happy to mount the mic pointing upwards.

The new Mount-A-Mic Mk2 is equally ingenious but much cheaper to manufacture. In essence, it consists of a single small piece of ply with two circular holes laser-cut into it. The smaller of the two holes is 3/8ths of an inch in diameter, so you can slide it directly onto the business end of a mic stand and secure it with a threaded washer, or attach it to the included 5/8 to 3/8 thread adaptor. The larger hole is shaped precisely to fit between the metal barrel and the plastic cable gland on a female Neutrik XLR connector. Simply unscrew the plastic part, pop off the barrel, put the Mount-A-Mic in between and reassemble the connector, which takes less than a minute. It's perfect for a small, lightweight mic like the BoRbon, and is supplied



along with a short cable. A stereo version for mounting two BoRbons in a Blumlein array is also available.

so instead, Extinct have developed an ingenious new version of their Mount-A-Mic (see box). You probably wouldn't want to use this with an RCA 44, but it's perfect for a featherweight like the BoRbon. This is supplied along with a leatherette pouch that holds the mic snugly; again, a wooden box would have added to the cost, so this seems a perfectly reasonable compromise.

## Shapes & Sizes

In the world of capacitor mics, large-diaphragm and small-diaphragm capsules are distinct designs. You couldn't create a KM84 capsule by

**“The BoRbon could be a lot heavier than it is, and it would still punch a long way above its weight.”**

scaling down a U87, or *vice versa*. By contrast, there's no fundamental difference between long and short ribbon motors. All else being equal, making the ribbon longer increases sensitivity and signal-to-noise ratio; but sensitivity is also related to the strength of the magnetic field within which the ribbon moves. Longer ribbons need to be wider than short ones in order to retain mechanical strength and stiffness, and

this in turn pushes the pole pieces either side of the ribbon further apart, reducing the strength of the field. The upshot is that the length of the ribbon isn't the main factor determining the technical performance of a ribbon motor. With today's powerful rare-earth magnets, long and short ribbons can perform more or less equally well as long as they are equally well designed. The BoRbon bears this out to a surprising extent, as we'll see.

Apart from an output impedance of 250Ω at 1kHz, formal specifications weren't available at the time of writing, but I would expect its measured performance to be typical of a well-designed passive ribbon mic. In a direct comparison, it seems a couple of dB less sensitive than my BM9s, but still puts out a healthy level. Like

almost all ribbon mics, the BoRbon has a figure-8 pickup pattern, but unlike most, its internal construction isn't quite symmetrical front-to-back. In some designs, such as the Royer R121, this asymmetry is intentional, and is meant to give the front and rear of the mic different tonal qualities. In the case of the BoRbon it's just a by-product of the design; it might be an issue if you want to use it as the Sides mic in an M-S array, but the



» front and back sounded pretty similar to me.

Unlike the BM9, the BoRbon is not offered as a matched pair, but if you ask Extinct nicely, they'll try to pick out two similar examples for you. The two BoRBons supplied for review were indistinguishable tonally, but one was perhaps 1dB more sensitive than the other.

### Vintage BoRbon

It's always useful to compare new mics to a known quantity when you're trying to get a handle on how they sound, so my first tests involved capturing the same sources on the BoRBons and on my own BM9s. This showed that the two Extinct mics have clearly different characters. Rather like the Royer mics, the BM9 has a significant presence boost in the upper midrange; it could even be called 'bright', or at least bright for a ribbon mic. And, as you'd expect of a figure-8 mic, it also exhibits a strong proximity boost when used up close. The BoRbon demonstrates an equally prominent bass tip-up, but the BM9's midrange presence boost is completely absent. Consequently, although it clearly has useful response well beyond 10kHz, it sounds quite a bit darker and smoother than the BM9s and Royers of this world.

The surprise to which I referred earlier came about in my next comparison. By chance, the BoRBons arrived for review at the same time as the Cloud 44 Midnight: a classy 'long ribbon' microphone which is marketed as an updated version of the iconic RCA 44. Out of curiosity, I put the two mics side by side on a stereo bar and sang into them — and they sounded uncannily alike, to the point where I'm fairly sure I couldn't have confidently picked the raw files from both mics apart in a blind test. It was only after I'd applied some treble boost and a huge amount of compression that differences began to make themselves apparent, and even then, these were slight. The Cloud had slightly more going on in the 5kHz area, and its overall sound was perhaps a touch smoother, allowing you to go further with EQ before any roughness becomes apparent. But you could absolutely use either of these mics to drop in on a vocal recording made with the other, and I'd be amazed if anyone noticed.

Of course, on-axis pickup is only one aspect of a mic's performance, and in fairness, the difference was a little more



Because of its asymmetrical design, the rear side of the BoRbon may sound a little different from the front.

apparent on drums, where the Cloud had greater bass extension and a marginally more polished-sounding midrange. Even so, it was still a close-run thing. The BoRbon could be a lot heavier than it is, and it would still punch a long way above its weight.

### Outside In

Engineers and musicians alike are often guilty of judging things with our eyes rather than our ears. We 'know' that large-diaphragm capacitor mics are good for studio vocals, so we feel uneasy using a pencil mic, though there's no technical reason why we shouldn't. And we associate the classic 'long ribbon'

tone with the mics that made it famous, most notably the RCA 44. The BoRbon is tiny and weighs next to nothing, which is a pretty important consideration if you're using it as a drum overhead or similar. It looks nothing like the RCA 44, or indeed any other mic. Yet it absolutely nails that sound. And it's half the price of any comparable UK- or European-made ribbon mic. Musicians might need some convincing to take seriously a mic that looks like a biscuit — but once they've heard the BoRbon, they'll be in no doubt. ■■■

£ £425 including VAT.  
W [www.extinctaudio.co.uk](http://www.extinctaudio.co.uk)

