Neumann MT 48

USB & RAVENNA Audio Interface

SAM INGLIS

Neumann have joined forces with Merging to create an interface that's both excellent and accessible.

Neumann are deservedly famous for their microphones, but over the years, they've manufactured other types of audio gear too. In the '70s, their range encompassed mastering lathes, mixing consoles and outboard equipment. More recently, parent company Sennheiser bought Klein+Hummel, leading to the development of Neumann-branded monitor speakers. And the subject of this review is another collaborative product, which has brought about another corporate acquisition. Neumann began talking to Merging Technology about developing a Neumann-branded audio interface more than two years ago, and the relationship blossomed to such an extent that Merging are now also part of the Sennheiser group.

Origin Story

The MT 48 takes as its starting point the Merging Anubis, a product that has, thanks to its unusual flexibility, enjoyed the distinction of being reviewed twice in *SOS*. The Anubis can be transformed to suit different roles by loading Missions. The Monitor Mission configures it as a hugely powerful stereo and surround monitor controller, while an Anubis running the Music Mission becomes an equally versatile audio interface for tracking and mixing.

The Anubis itself is a compact, desktop interface, but unlike most such devices, it connects to the host machine over Ethernet, using the RAVENNA protocol. This enables one of its key features: 'peering' with other Merging products such as the Horus and Hapi. The additional I/O is integrated in a completely seamless way, such that every aspect of the peered device can be controlled as if it was built in to the Anubis. This elegant approach to I/O expansion is beautifully handled by Anubis's other stand-out feature, the high-quality touchscreen that offers complete control over its internal mixer and other settings. For the full low-down on the Anubis Music Mission and peering, take a look at our review from June 2021: www.soundonsound.com/reviews/merging-anubis-music-mission.

A New Anubis

The Merging Anubis remains a current product, and as far as I'm aware there are no plans to cease development or roll it into the Neumann line. The MT 48 occupies the same metal shell, albeit in a different colour scheme and with a Neumann logo in place of the Merging branding. It also has the same quotient of analogue I/O as the Anubis: there are two quarter-inch instrument inputs and two headphone

Neumann MT 48

£1750

PROS

- Inherits almost all of the Merging Anubis' features, including its excellent touchscreen implementation and ability to operate and peer as a RAVENNA interface.
- Adds easy-to-use, plug-and-play USB connectivity and optical I/O.
- Sounds superb.

CONS

- Only offers a single optical in and out.
- No equivalent of the Anubis Monitor Mission, and hence no surround support at present.

SUMMARY

Neumann and Merging have successfully tweaked the feature set of the existing Anubis to nudge it further towards the music production market. They haven't fixed anything that wasn't broken, but the addition of USB connectivity is a big plus.

outputs on the front, while the rear panel features a pair of mic/line inputs on combi jack/XLR sockets, a pair of main outputs on XLRs, and an additional pair of balanced line outputs. Another pair of 'general purpose' quarter-inch sockets can be used to connect footswitches, or as MIDI I/O with optional adaptors.

Look to the left of the back panel, though, and you'll spot some crucial differences compared with the Anubis. The MT 48 can operate as a network interface, but has only a single RJ45 Ethernet port. All current Anubis variants have two, as a redundant connection is required in markets such as broadcast. In place of the second RJ45, the MT 48 features two USB Type C sockets. One of these is labelled Power, but as the MT 48 draws up to 5A, bus powering won't usually be an option; it comes with its own USB supply, or can be powered from a suitably hefty power bank. Alternatively, it can be powered over Ethernet.

The other USB socket is labelled Data, and signals that this is not only a RAVENNA interface. The MT 48 is a class-compliant USB device, and as such, works with Apple computers and iPads without the need to install a driver. Windows users will of course need to install an ASIO driver for low-latency operation.

Peering over RAVENNA is supported just as it is on the Anubis, whichever protocol is used to connect the MT 48 to the host computer, but unlike the Anubis, the MT 48 also sports a pair of Toslink optical digital ports. These can carry stereo S/PDIF digital audio or up to eight channels of ADAT digital audio in either direction. High sample rates are supported, with the ADAT channel count falling to four at 88.1 or 96 kHz, and two at higher rates. The highest sample rate available on the MT 48 is 192kHz; the Premium version of the Anubis, by contrast, offers 384kHz PCM and DSD recording too.

Hands On

One of the drawbacks of networked audio is complexity, and setting up an Anubis or MT 48 system over RAVENNA using the full-fat ANEMAN utility is not for the faint-hearted. Merging have simplified this process significantly with their UNITE configuration wizard, but it's probably still fair to say that audio over IP is both overkill for and intimidating to many people. The provision of a USB alternative thus makes perfect sense and helps to differentiate the MT 48 from its progenitor. Since networked operation was described in our reviews of the Anubis, I'm going to concentrate here on the MT 48 as a USB device.

On macOS, the MT 48 uses the built-in Core Audio driver, but you can and probably should also install the MT 48 Toolkit app. This runs in the background and places an icon in the toolbar. Clicking on it brings up a short list of options, of which the most important are Open Web Control and Launch Remote Control App. These actually do pretty much the same thing; like the Anubis and some other interfaces like MOTU's AVB range, the MT 48 is controlled using the hypertext protocol, meaning that its control panel is essentially a web page. The Remote Control option simply opens this in a separate, dedicated browser app rather than in your default web browser.

The browser-based control panel is no more elegant or graphically sophisticated than it was with the Anubis, but it's clear and functional. More to the point, it's largely superfluous, since the MT 48 has the same superb touchscreen implementation as the Anubis. I've come across several interfaces with touchscreens now, and this is the only one that offers comprehensive, intuitive control over absolutely every parameter. I'm sure most users will rarely open the control panel software and will work entirely from the interface itself.

As on the Anubis, both the front panel and the browser-based control panel give full control over the internal mixer and also over the MT 48's mic preamps. These are exactly the same as those of the Anubis, but the gain parameters are presented slightly differently. Whereas the Anubis offered -12dB pad and +12dB boost options alongside the fully variable, digitally controlled 0-66 dB gain range, the MT 48 is configured so that the default gain range is 12-78 dB, with the option to introduce either -12 or -24 dB pads. There are a handful of other minor changes, such as new graphics for the gain controls and a wider choice of cutoff frequencies for the high-pass filter, but in essence, the two units are sonically identical. That's a good thing, because it means the MT 48 inherits not only the Anubis's excellent preamps but also its superb audio specs, the highlight being its 136dB output dynamic range.

The Anubis's internal effects and signal conditioning are available here, too, meaning that input channels have comprehensive EQ and dynamics plus a send to a global reverb. What's new and exclusive to the MT 48 is that both the raw and the conditioned signals are available separately as inputs to your DAW. In other words, you can give the artist a compressed, equalised version of their sound in the cue mix, and record either or both that and the dry signal to separate tracks. In fact, since there are four onboard mixes available, you could fade up the processed signals in the artist's cue mix and the dry ones in the engineer's mix. The EQ and dynamics are »

At the back we find a pair of USB-C ports, an RJ45 Ethernet connector, optical I/O ports, 'general purpose' quarter-inch I/O for footswitches or MIDI, a pair of quarter-inch line outputs, a pair of XLR main outputs, and pair of XLR/jack inputs.

If you're reading this in the print edition then this photo is only a little under life size. Cute, isn't it?

» fairly utilitarian digital processes, so I don't think you'd use them to add character in the way you might analogue outboard, but there are certainly circumstances where this facility could be useful.

Performance

What hasn't changed compared with the Anubis is the general sense of no-expense-spared quality and attention to detail. The shell seems to have been milled from a single piece of metal, making it robust, heavy and a very effective heat sink for the internal circuitry. Small holes at either end reveal the presence of internal fans, but these never came on in my testing; and, like virtually every other aspect of the MT 48's design, from line level calibration to headphone crossfeed to reverb decay time, their operation is adjustable from the touchscreen. The option of powering the MT 48 over USB or Ethernet creates redundancy, so it doesn't bat an eyelid if you plug one connector in and then unplug the other.

The Anubis sticks in my mind as being perhaps the best-sounding interface I've reviewed, and the MT 48 is no different. From its super-clean yet musical preamps to its high-class headphone amps, it's pretty close to state of the art, and I would happily use it even in the most sonically demanding roles such as mastering or classical recording. The addition of USB operation makes it truly plug and play, at least on macOS and iOS, and the optical I/O makes it trivially easy to add a few extra inputs when needed. Having said that, this is a fairly minimal implementation of ADAT expansion: you'd perhaps expect an interface in this price bracket to offer a second pair of optical connectors to maintain the channel count at high sample rates, and a word clock output.

I tested the MT 48 on the same computer I used for my Anubis Music Mission review, and the comparison in terms of latency performance between USB and networked operation is interesting. Signal processing that's implemented on the interface itself inevitably adds to the round-trip latency, and on some interfaces I've tested, this additional delay can amount to several milliseconds. Low latency has been a priority in the design of the MT 48's internal mixer and processing: the exact figure depends on the choice of filter you select for the D-A converters, but can be as low as nine samples. This brings the minimum round-trip latency at 44.1kHz to just under 5ms at the smallest 32-sample buffer size available over USB. That's lower than the 7.2ms you get with the same buffer size under RAVENNA, but can't quite match the 3.6ms available with the RAVENNA-only 16-sample buffer size. Either way, it doesn't quite match the performance of typical Thunderbolt interfaces, but is easily good enough for most purposes.

Conclusion

So, should you buy the MT 48, or the Anubis? There are a few Anubis features missing from the Neumann product; as already noted, these include DSD operation and a second RJ45 port for redundancy. There's also no current equivalent of the Monitor Mission, and the MT 48 lacks the Anubis' ability to import speaker EQ settings from Sonarworks SoundID. But unless you're working in broadcast, doing high-end classical recording or running an Atmos studio, I don't think these features will be missed (and Neumann have promised surround support in the future). By contrast, the addition of plug-and-play USB connection and ADAT expansion definitely make the MT 48 more appealing to the music producer on the go. And, in my humble opinion, the Anubis was already pretty tempting to start with.

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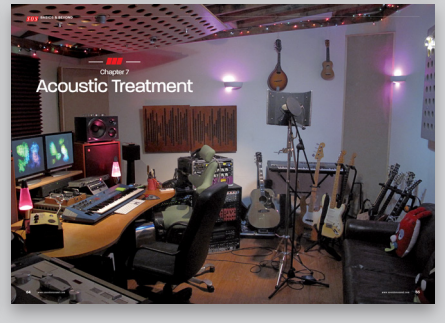

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