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VIDEO SPECIAL

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TEST

NEUMANN MT 48

Von Null
auf
HighEnd



TEST

CRANBORNE AUDIO CARNABY 500
Weltweit erster Harmonic-EQ



English Translation

POCKET-SIZED EXCELLENCE

From the „Neumann Bottle“ of the 1930s to the present day, Neumann, hailing from Berlin, has consistently been synonymous with world-class sound and unwavering reliability in the realm of microphones. Over time, their portfolio has expanded to encompass premium-grade speakers and headphones, solidifying their position. However, one crucial link was absent in this sonic signal chain - audio interfaces. The gap has finally been closed thanks to a collaboration with the Swiss network audio experts at Merging Technologies. The new MT 48 interface seeks to fulfill the promises implicit in the Neumann name. In this review, we delve into whether the MT 48 lives up to these expectations.

professional **audio** **AUDIOGRAMM**

Neumann MT 48

- Exceptional preamp and converter quality
- Outstanding headphone amplifiers with crossfeed function
- Intuitive operation and excellent build quality
- +** • Full stand-alone operation thanks to the touchscreen display
- Ravenna network integration and remote control via AES67 interface
- Built-in talkback microphone
- Substantial DSP reserves for future applications
- No 32-bit floating-point conversion
- • No Wordclock connections
- Software control can be somewhat cumbersome at times

With the MT 48, Neumann spectacularly fills a gap in their product lineup. This compact unit delivers superb sound quality alongside high usability and an extensive range of features.

BY CARLOS JÜNEMANN
TRANSLATED BY JULIAN DAVID

► With a manufacturer like Neumann, expectations of world-class quality come naturally, as the nearly century-old legacy casts its illustrious influence far ahead. To alleviate the suspense just a bit, let it be known right away: With their inaugural foray into the realm of audio/MIDI interfaces boasting network-grade capabilities, the Berlin-based company once again impresses wholeheartedly on the plane of quality; a feat that naturally comes with its corresponding price. The investment? 2,000 Euros, give or take.

Given the collaborative effort with their Swiss partners and considering that the new MT 48 (where 'MT' stands for Merging Technologies) shares an almost identical hardware blueprint with the well-established "Anubis" interface from their product lineup, the endeavor was bound to succeed. However, it's crucial to acknowledge that both devices (and their respective companies) cater to distinct markets and target demographics. Merging tends to focus on the broadcast and installation sectors, while Neumann has historically honed in on music-producing creators, sound maestros, and recording and mixing engineers. You should savor the following review if you belong to the latter category. But let's not get ahead of ourselves.

Guided Tour

Solidly encased, the exquisite tabletop unit arrives in a convenient soft case, primed for travel, accompanied by a trio of USB cables (two USB-C to USB-C, one USB-C to USB-A) and an external power supply. Furthermore, a concise, printed user manual is included, albeit sparing in details about power supply specifications. They are, however, placed on the underside of the device itself. Seek, and ye shall find - and in doing so, I stumble upon yet another distinctive feature: the threaded socket on the baseplate, designed for tripod mounting. Neumann provides additional getting-started guides and overviews through the adept use of digital media, offering PDF documents and impeccably crafted tutorial videos on both the product page and YouTube.

The initial visual impression is one of sophistication and modernity. This can

be attributed, on the one hand, to the high-quality, champagne-hued all-metal casing, and, on the other, to the integrated touch-screen display and the softly illuminated buttons in pastel shades of light blue or orange. A visual resemblance to direct competitors such as UAD's Apollo Twin X or Antelope's Zen Tour Synergy Core is faintly evident in terms of chassis dimensions and the prominent presence of the "Big Knob," with the Neumann finish leaving the most subjectively affable impression. A concealed aspect becomes apparent during a change of location: The MT 48 is heavier than expected, weighing nearly 1.6 kg, providing a sturdy foundation and a high degree of slip resistance courtesy of its rubber feet.

Setting up is an utterly straightforward process thanks to class-compliant compatibility with Mac and iPad. The only point of note is understanding the power supply: The interface must be connected via a separate USB-C connection to the power adapter or through Power over Ethernet (PoE). It's worth noting that bus-powered operation is not supported, and PoE from the computer is also not to be expected. The latter is feasible only with suitable routers or comparable components.

For PC users, installing the driver software from the product page is highly recommended unless you're ready to dive into standalone operation right away - a task easily accomplished with the touch-screen interface. A producer or musician



CARLOS JÜNEMANN

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on the go could, for example, simply plug in a microphone and/or electric guitar, don their headphones, and commence playing. The integrated digital mixer offers several options for refining the sound, but more on that later.



Individual mixes are available for all outputs - even entirely independent of the computer via the touch screen.



The rear panel features analog and digital inputs and outputs. There are two separate USB-C ports for data transfer and power supply integrated. An AES67/Ravenna signal is routed through the Ethernet port.

Before the fun begins, a bit of patience is in order as the little jack-of-all-trades gradually ramps up its abundant DSP power. The boot time takes around a minute. The excitement that follows, however, is even greater as the MT 48 brims with meaningful features, intuitive usability, and exceptional sound quality. Wonderful.

Naturally, such power generates a certain amount of heat emission, which is especially noticeable at the “Big Knob” rotary control and above the USB ports. Nevertheless, the built-in fan remains silent at normal room temperatures up to the mid-20 degrees Celsius range. It’s software-controllable and installed more for extreme conditions and safety rather than as a necessity.

A Cornucopia of Features

The new Neumann is more than a mere compact audio interface or monitor controller, for it harbors an almost prodigious array of features, all sharing two core attributes: top-tier quality and meticulous finesse. Thus, navigating its operations becomes a near-constant exercise in intuitive delight. Given the depth of its offerings, it’s regrettable that not all functions and capabilities can be covered in this space; nevertheless, let’s delve into the most essential aspects.

The fundamental functions are readily apparent by the physical connections on the device. On the analog front, four inputs are distributed across two combo and two quarter-inch jacks for instruments or line signals, with each input serving dual roles. They feed either into the exceptional microphone preamps (inputs 1 and 2) or the 1 MΩ Hi-Z instrument preamps (Inputs 3 and 4) while simultaneously functioning as standard line inputs (1 to 4). All these signals can be independently mixed into four separate subgroups and adorned with per-channel and per-group

effects. They can then be routed to the six analog outputs (two XLRs for Monitor-A, two balanced jacks for Monitor-B, and two headphone outputs). Individual mute buttons grace each output, as well as a master mute function triggered by holding the mute button for two seconds—a valuable tidbit to keep in mind.

Unlike the Merging Anubis, the little Neumann boasts an optical ADAT interface on the digital end, offering eight additional input and output channels via an external converter. Should ADAT not be required, the connection can accommodate the two-channel S/PDIF protocol. Even more channels (theoretically up to 256) can be harnessed via the built-in AES67/Ravenna interface, primarily catering to signals from so-called “peered interfaces” in the Merging cosmos, such as “Hapi,” “Horus,” or “Anubis.” It can also be utilized for powering expansive monitoring arrays in cases of surround or Dolby Atmos applications. Naturally, the network-capable speakers of the Neumann KH series stand as the optimal companions in such endeavors.

An optional MIDI adapter (jack to 5-pin optocoupler) facilitates standard MIDI connections via DIN plugs. If this feature is unnecessary, the jack sockets can be repurposed for footswitch connections (GPIO), perhaps for engaging the built-in talkback microphone. Possessing a he-

misphere polar pattern, this microphone can be activated either as a latching switch or a momentary push-button (talk latch function) using the same hardware button. It can be routed to individual monitor mixes and even recorded for slate announcements. The sole inconvenience: a constant 10 kHz whine at around -45 dB level accompanies the signal, rendering it unusable as a full-fledged audio source. However, this quirk in no way hampers its communication purposes.

Through a USB connection, the MT 48 establishes a close rapport with the host computer, enabling simultaneous recording of all input signals on separate tracks, both with and without effects, within your DAW software. Consequently, Neumann’s EQ and compression offerings can be “printed” in the traditional sense during recording without compromising the purity of the capture. A splendid feature, indeed! Conversely, up to four stereo submixes can be played back from the DAW, ideal for A/B comparisons or facilitating tailored playback mixes. In live scenarios, the MT 48 can be remotely controlled via an iPad on the network, allowing for personalized monitoring, among other applications. For content creators, the easily attainable loopback function, thanks to the integrated DAW returns, is a “must-have” for recording or streaming the very content being produced and hosted.

Despite its extensive connectivity, one would search in vain for a Wordclock BNC connection, even though the exceptional converter quality might suggest employing the MT 48 as a clock master. While this can certainly be achieved using the embedded clock in the ADAT connection or the AES67 network, it might only partially match the caliber of a dedicated Wordclock link’s quality and accuracy. Finally, the two built-in headphone amplifiers undeniably emerge as standout features



On the front are two instrument/line inputs and two headphone jacks.

on the MT 48. Boasting a source impedance of merely 35 milliohms and a maximum output level of +16 dBu, these amplifiers can drive headphones of nearly any impedance, rendering signals loud and crystal clear. An extra treat lies in the software-integrated crossfeed function designed to conjure a “speaker-like experience” for enclosed ears. It’s a remarkable touch!

Augmented Reality or: Digitally Enhanced...

As mentioned, the test subject is autonomously controllable via its integrated touch screen. This renders computer-based control essentially superfluous and imparts a distinctively “analog” feel, setting it apart from many other compact interfaces. Interacting with the touch screen alongside the endless rotary encoder (the “Big Knob”) is child’s play. A mere tap on the desired function followed by adjustments using the comfortably gripped knob suffices. An especially helpful touch: Dedicated buttons exist for default settings like “faders at zero.”

For those who still prefer managing affairs from their computer, a local control software resides on the host machine, complemented by a web-based variant. The latter extends accessibility across the entire network via LAN cable or Wi-Fi router. However, the local remote control app could benefit from a slight makeover. Regrettably, it lacks GUI scalability. Consequently, the window is fixed in size on the screen. Moreover, navigating menus through scrolling isn’t the most intuitive process. Mouse-wheel operation isn’t viable, as it influences the output le-

vel of the presently selected mix. Hence, scrolling necessitates clicking and dragging the left mouse button. Knowing the technique is vital.

Beyond these minor quirks of the app, the control software unveils an elaborate, nearly latency-free 48-channel digital console that fits in your pocket, significantly augmenting the analog components. All channel strips and buses feature EQ and dynamics processing (gate, compressor, limiter). The EQ draws from the top-tier Pyramix EQ-X and is both direct and intuitive to operate. Additionally, each channel boasts a send to the onboard reverb, enhancing the monitoring experience. A boon for vocalists who find greater inspiration and motivation in their performance thanks to the built-in effects.

Activating the dynamics processing per channel is a tad more intricate. They must first be engaged using the “On” button. This button appears twice, once on the touch screen and once in the app’s interface. However, only the upper-right button triggers activation. The second instance (lower-left) essentially acts as a bypass for each processing type (gate/comp/limiter) and would be clearer with such labeling. In general, expect a brief second-long wait for the DSP to switch on or off. It’s bearable, but compared to DAW plugin operation, it requires a bit of getting used to it.

Speaking of plug-ins: Unlike competitors such as Antelope or UAD, Neumann has yet to offer DSP plug-ins for the DAW. This divergence might serve as an impetus for modern producers to return to time-honored virtues, leveraging the high-quality EQs and dynamics of the MT 48 during recording rather than endlessly deferring decisions. A few additions would certainly be desirable and, thanks to substantial DSP reserves, remain feasible in the future. Guitarists, in particular, would delight in a tuner – especially for stand-alone use. A vocal de-esser would also be a welcome addition.

By the way, the “sibling” Anubis from Merging currently presents an extra feature: direct integration of Sonarworks room correction into the monitoring. This correction is stored within the interface, rendering the necessity of plug-in solutions or system-wide hacks on the computer



A standard MIDI connection is available via an adapter, which can be obtained as an additional purchase.

obsolete. For the sake of flexibility, this would also make a fantastic supplement for the MT 48. However, Neumann has opted for their proprietary and reportedly superior room correction system, the MA 1. Contrarily, its correction curves are stored in the DSP-based KH series speakers, enticing users to embrace Neumann fully.

A final note on the digital processing core: Neumann has chosen a 32-bit fixed-point conversion for precision reasons. In contrast to other DAWs, for Cubase/Nuendo, this appears as an additional driver named MT 48 High Precision (instead of MT 48) on Mac systems. However, a clipping-resistant 32-bit floating-point conversion would be a compelling proposition for all active field recordists. Rumor has it that Neumann intends to introduce such a feature in upcoming generations. We eagerly anticipate it.

Top-Class Sound

Perhaps the most critical and resolutely executed feature of the MT 48 is its truly magnificent, nuanced, silky-smooth yet assertive sound. This quality extends from the excellent mic preamps with up to 78 dB of gain to all other ins and outs, including the converters. They transmit the signal with exceptional spatial depth and the trademark Neumann-esque hi-fi feel (in the best sense) to the speakers. In a direct comparison with the UAD Apollo, the MT 48 sounds subjectively smoother. Additionally, it imparts a touch more warmth in the lower mids. The sound beckons one to recline and indulge in its charm.

For mixing, and particularly for mastering, I personally find the sound to be almost



The bottom side features a 3/8-inch thread, enabling mounting on a microphone stand.



a tad too “beautiful.” This might lead to a swift satisfaction with the sound regarding potential “digital harshness.” Yet, over time, it’s undoubtedly a matter of getting used to it. In essence – as previously mentioned – these are subjective impressions, and it’s crucial for everyone to form their own judgment and put the device to the test. The stereo width seems slightly narrower than the UAD Apollo conversion, hinting at the MT 48’s well-functioning word clock (phase lock between channels).

The mic preamps shine exceptionally well for recording of all kinds in the (home) studio and on the go. They provide noise-free, top-quality sound without compromises, whether with condenser or ribbon microphones. A similar level of excellence is apparent in the instrument tests involving the genuinely authentic hi-Z inputs, which can yield superb results with an impedance of 1 MΩ (2 MΩ with a balanced connection).

Finally, the truly outstanding headphone amplifiers not only excel in terms of high-resolution sound and ample power reserves but also include a somewhat concealed crossfeed function found in the menu under Settings/Monitoring. At around 30% crossfeed, loud mono signals such as

bass and vocals distinctly appear in front of the headphones. This prevents the peril of mixing these elements too prominently while working with headphones, thus sparing unpleasant surprises during subsequent speaker monitoring. So great!

Conclusions

With an elegant “grab bag” in a pocket-sized format, Neumann spectacularly bridges the gap in their product lineup. The MT 48, a high-class audio/MIDI interface, premium headphone amplifier, top-tier converter, and network-controllable stand-alone digital mixer, resides within a small, portable metal enclosure that effortlessly slips into any travel backpack. This design leaves virtually no boundaries to its applications and its intended audience. From DJs or touring live musicians to home studio producers and professionals in recording or broadcasting studios, it caters to an extensive range without compromising quality, and certainly leaves little to be desired in terms of functionality.

Given its exceptional sound quality packaged into an incredibly compact form factor while maintaining a high level of usability, Neumann certainly deserves commendation. This interface will undoubtedly set the benchmark for the upper “compact class” in the future. ■

MT 48

Manufacturer	Neumann
Distributor	https://neumann.com
Type	USB Audio Interface
Price [MSRP]	€1.995
Color	Champagne
Dimensions	370 x 100 x 170 mm/cm (W x H x D)
Weight	1.58 kg

Technical Specifications

System Requirements	Windows 10, 64-bit; macOS 10.15 and later (both Intel and Apple Silicon supported)
USB-Audio	32 Inputs, 16 Outputs up to 48kHz, 16 In/16 Out up to 96 kHz, 8 In/16 Out at 192kHz, word depths up to 32-bit fixed point
Wordclock I/O	No
Dynamic Range	Up to 138,5 dB A

Features

Analog Inputs	2x Combo, 2x 6.3 mm - 1/4" Jack
Analog Outputs	2x XLR, 2x 6.3 mm - 1/4" Jack, 2x 6.3 mm - 1/4" Stereo Jack (Headphones)
Digital Interfaces	1x Ethernet (AES 67/Ravenna), ADAT/S/PDIF I/O (optical), MIDI I/O (via GPIO/MIDI 6.3 mm - 1/4" Jack)
Other Connections	GPIO (Footswitch-Control via GPIO/MIDI 6.3 mm - 1/4" Jack)
USB	2x USB-C (Power, Data)
Controls	1x Continuous Rotary Knob, 7 Buttons, 1 Power Switch
Display	Color Touch Display
Stand-Alone Mixing Software	Yes, with EQ, Gate, Compressor, and Limiter per channel + Reverb for monitoring

Included in package

Softcase, USB-A and USB-C data cables, and external power supply with USB-C connection
Optional: Jack >> DIN adapter (for MIDI connections)

Special features

Built-in touchscreen display and the mixing software allow for completely stand-alone monitor mixes. Ravenna interface allows remote control of up to 256 channels I/O via Ethernet connection. Record post-FX while tracking, tripod thread on the underside, integrated talkback microphone.

Bewertung

Kategorie	Top Class
Features	Very Good
Operation	Very Good to Outstanding
Build Quality	Outstanding
Sound	Outstanding
Overall	Outstanding

The fan only rarely engages, resulting in quiet sessions being the norm.

