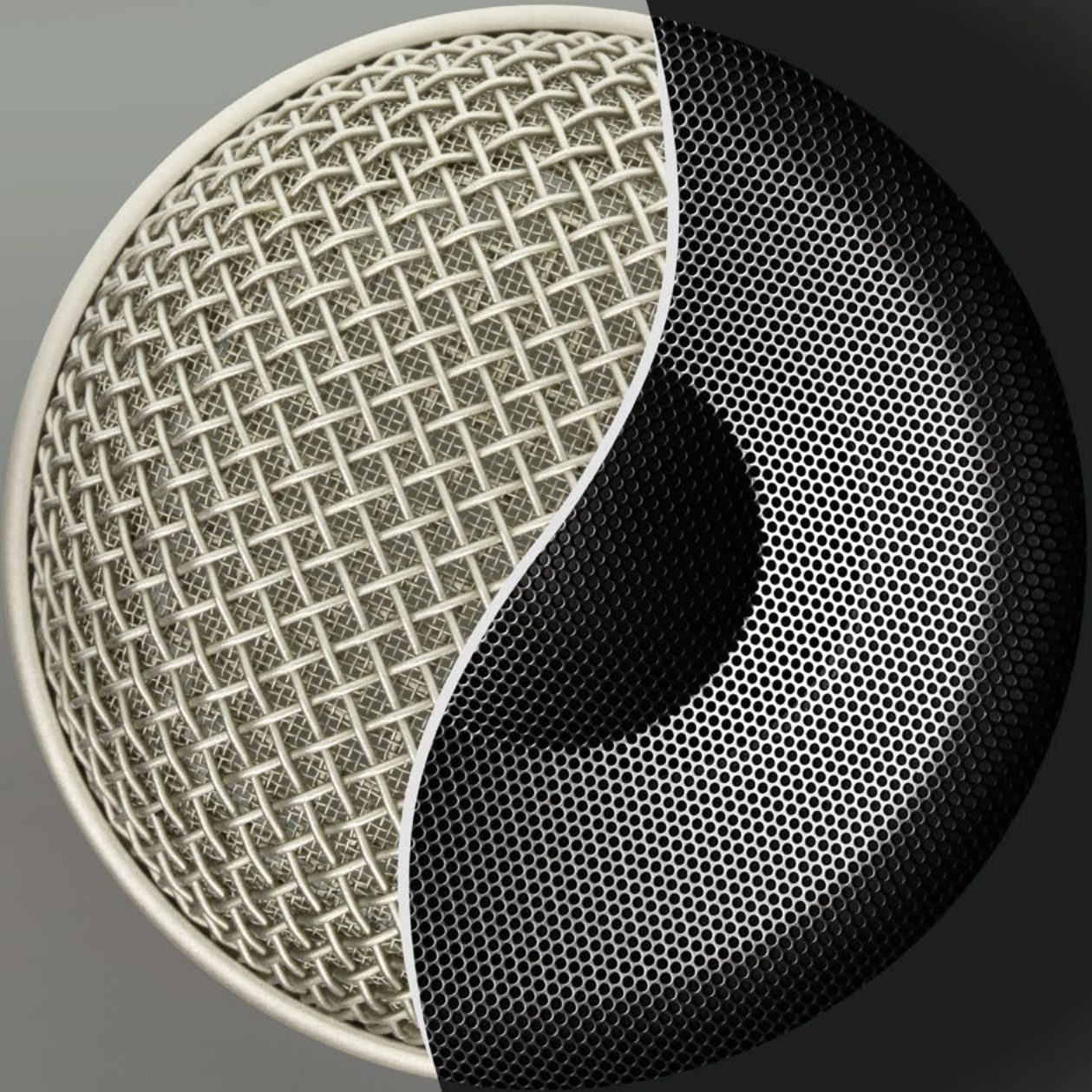




▶▶ NEUMANN.BERLIN



A SELECTION OF PRODUCTS



STUDIO MICROPHONES

TLM 102 4
 TLM 103 6
 TLM 107 (switchable)..... 8
 TLM 19310
 TLM 49.....12
 TLM 67 (switchable)14
 KM 184 (Series 180).....16

HANDHELD MICROPHONES (STAGE)

KMS Series18

STUDIO MONITOR SYSTEMS

KH 80 DSP 20
 KH 12024
 KH 805.....28



Made in Germany



U 87 – Probably the best known Neumann microphone

ABOUT NEUMANN

THE NEUMANN LEGEND

For decades, Neumann has been regarded worldwide as the standard-setting, leading manufacturer of studio microphones. Neumann is well-known in the audio industry for its high quality microphones in studios and on stage. Neumann has been a pioneer in the audio industry for over 80 years with a long history of world-class products.

THE ORIGIN OF ALL STUDIO MICROPHONES

Many products introduced in the history of the company have become milestones of professional audio technology. It is no accident that when listing their equipment, audio studios almost always put Neumann microphones at the top of the list – they are a recognized sign of a highly professional operation.

“Our decades of success are based on an uncompromising, quality-oriented approach, in both the development and manufacture of our products,” explains

President Wolfgang Fraissinet. “On the rare occasions that servicing is required, Neumann Berlin repairs all of its microphones produced since the second world war, to a large extent using the original spare parts.” This servicing pledge is hard to equal.

HIGHEST SOUND QUALITY

All this gives the customer the certainty of acquiring a product with unsurpassed sound quality, reliability and lasting value, an investment that usually survives several generations of audio engineers. Although Neumann microphones certainly are not cheap, professionals know from their daily experience that they are worth the cost. Many owners of home recording studios also dream of having “a real Neumann” of their own.

In addition to countless audio engineers who use Neumann microphones in their studio productions, users include world-famous musicians. No matter what style or generation you prefer, to find users of these high-end products from Berlin the best approach is to begin simply by listing your own favorite musicians.

A COMPANY WITH A LONG HISTORY

However, the company that was founded in Berlin in the year 1928 was also concerned for a long time with other technology in addition to microphones. The versatile inventive genius and pioneer Georg Neumann simultaneously developed phonograph record-cutting machines and rechargeable batteries. The technology of the latter remains the basis for today’s ubiquitous storage batteries.

For many years, the company also built highly customized sound production units for radio studios, theaters and concert halls. In the year 1991 Neumann became an important part of the Sennheiser Group.

Since 2010, Neumann offers this expertise in electro-acoustic transducer technologies to the studio monitoring market, and will provide optimum solutions to its customers in the areas of TV and radio broadcasting, recording, and audio productions.

Neumann now stands for the highest quality at both ends of the audio production chain: “Best Input and Best Output”. The company headquarters, with the development, marketing, sales and service departments, continues to be located in Berlin.

QUALITY AND PRECISION

As of a few years ago, manufacturing in ultraclean room conditions meeting the highest international standards is carried out in Wedemark, near Hannover. Despite all the progress in machines and production technology, manufacturing a high-quality microphone involves a great deal of handicraft, upon which the quality of these transducers and a reputation such as Neumann’s ultimately depend.

To meet the operating conditions encountered in the studio the microphones are tested throughout their manufacture. The capsules alone undergo more than 50 different tests before final assembly.



The U 47 (1949) – a legendary Neumann microphone



A Neumann disc cutting lathe in the 80s



A highlight of the company's history: The Technical Grammy of 1999



KH 80 DSP, a monitor of the Neumann KH Line with digital signal processing

EXCELLENCE IN AUDIO RECORDING.



» NEUMANN.BERLIN

TLM 102



VARIANTS:



The TLM 102 is available in nickel and black with a swivel mount. We also offer sets with a color-matching elastic suspension to protect the microphone against rumble and impact noise.

The swivel mount and elastic suspension serve to mount the microphone on a microphone stand. The microphone stand is not part of the delivery scope. An adapter for all common microphone stand threads is included.

TLM 102



Home Studio



Broadcast



Prof. Recording Studio



Film/Voice Over



Concert Hall



Live Sound

A TRUE NEUMANN AT AN AFFORDABLE PRICE. BIG SOUND IN A SMALL PACKAGE.

- Plug and play handling
- Distortion-free sound even at the highest sound pressure levels
- Slight treble boost for brilliant sound

SMALL MIC – HUGE SOUND

So small, so compact: When you see the TLM 102 for the first time, you might underestimate it. But when you hear it for the first time, you will be overwhelmed. The reason: when it comes to its technology, our smallest is a big player. We developed the TLM 102 as a universal talent for vocal and instrumental recordings. Its finely tuned sound signature especially accents the area of 8 to 12 kilohertz, which is crucial for human voices. The recordings get a silky elegance typical of large diaphragm microphones; the voice gets a noble presence in the overall mix. Suddenly, there's a natural, organic separation between your vocal and your acoustic guitar, for example. Nevertheless, the TLM 102 remains easy to handle and deals masterfully with critical consonants or sibilants: It has an integrated pop shield.

HIGH VOLUME? NO PROBLEM AT ALL.

The TLM 102 also processes extreme volume and jumps in dynamics without distortion. That makes it an excellent choice for miking loud amps and drums. Our “baby” reproduces sound pressure levels of up to 144 dB (e.g. very loud trumpet at a distance of 10 cm) with great clarity: open, detailed, with powerful bass and refined treble.

TALKING ABOUT THE PRICE

The TLM 102 stands for legendary sound at an unheard of price. We remodeled the production and omitted rarely used functions (such as pattern, pad, and low cut switches). When you hear the TLM 102, you'll immediately notice what we did not omit: the Neumann sound, which remains faithful to its big role models.



TLM 102

Max SPL **144 dB**

S/N Ratio **82 dB**

Sensitivity **11 mV/Pa**



TLM: CLEAR SOUND, POWERFUL BASS

Our TLM series works with a transformerless output stage. This means: a clean and direct sound, very “close” to the acoustic source, and a powerful bass transmission all the way down to the lowest frequencies. Its transformerless output stage also makes the microphone resistant to electromagnetic fields and minimizes transmission losses.

BIG SOUND IN A SMALL PACKAGE.



▶▶ NEUMANN.BERLIN

TLM 103



VARIANTS:



The TLM 103 is available in **nickel and matte black** with a swivel mount. We also offer mono and stereo sets with a color-matching elastic suspension to protect the microphone against rumble and impact noise.

The swivel mount and elastic suspension serve to mount the microphone on a microphone stand. The stand is not part of the delivery scope. An adapter for all common microphone stand threads is included.

TLM 103



Prof. Recording Studio



Home Studio



Broadcast



Film/Voice Over



Concert Hall



Live Sound

LETS YOU HEAR THE GRASS GROW.

- The modern classic especially for vocals and spoken word.
- Capsule design based on the legendary U 87
- Extremely low noise
- Lends voices a superior presence
- Our bestseller

PROFESSIONAL TOOL FOR YOUR HOME STUDIO

In 1997 we surprised quite a few ears with our large diaphragm microphone TLM 103. Its technical performance set new standards and, for the first time, the Neumann sound became affordable for private customers, too.

The extremely low self-noise of the TLM 103 is regarded as a milestone. In technical terms: a noise level of just 7 dB(A). In other words: the TLM 103 is so low noise that even the faintest nuances become audible. Thus, it is perfectly suited for vocals and audio drama productions in high definition as well as for demanding samples production and instrumental recordings.

ONCE THE LITTLE BROTHER – NOW A MODERN CLASSIC

We equipped the TLM 103 with a very broad presence boost in the area of 6 to 15 kilohertz, which helps the voice to cut through the mix. The TLM 103 offers everything demanding users could wish for: nuanced vocals with precise reproduction of sibilants and excellent speech intelligibility. The sound character of the TLM 103 cannot deny its origin: Its role model in the development process was our U 87, which is regarded as the reference microphone in studios around the globe. After almost two decades, the TLM 103 has become a modern classic itself, setting new standards with its characteristic presence and its extremely low self-noise.



TLM 103

Max SPL **138 dB**

S/N Ratio **87 dB**

Sensitivity **23 mV/Pa**



Also available as digital version (AES42):
TLM 103 D

TLM: CLEAR SOUND, POWERFUL BASS

Our TLM series works with a transformerless output stage. This means: a clean and direct sound, very "close" to the acoustic source, and a powerful bass transmission all the way down to the lowest frequencies. Its transformerless output stage also makes the microphone resistant to electromagnetic fields and minimizes transmission losses.

LETS YOU HEAR THE GRASS GROW.

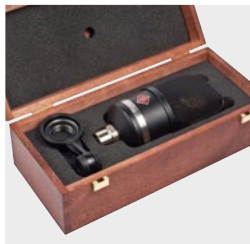


» NEUMANN.BERLIN

TLM 107



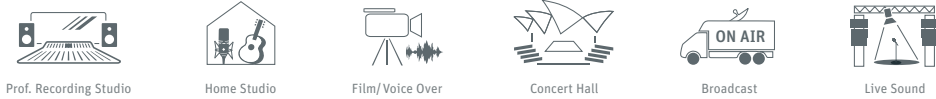
VARIANTS:



The TLM 107 is available in nickel and black with a swivel mount. We also offer studio sets with a color-matching elastic suspension to protect the microphone against rumble and impact noise.

The swivel mount and elastic suspension serve to mount the microphone on a microphone stand. The microphone stand is not part of the delivery scope. An adapter for all common microphone stand threads is included.

TLM 107



HIGH DEFINITION SOUND IN FIVE POLAR PATTERNS. A TRUE STUDIO WORKHORSE.

- Extremely versatile for vocals and instruments of all kinds
- Highly defined sound in five polar patterns
- Extremely low noise and distortion

DISCOVER THE FREEDOM OF SOUND

This could be your desert island microphone: Smooth vocals, brilliant acoustic guitars, powerful drums, thunderous bass, silky strings, fat brass, you name it! The TLM 107 offers reference quality high resolution sound in five polar patterns. The TLM 107 is the ultimate studio workhorse.

A NEW BEGINNING

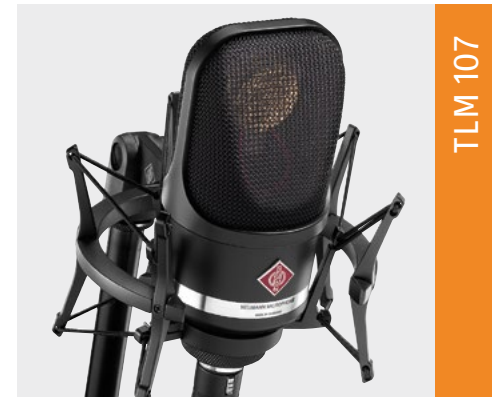
Nostalgia was the last thing on our minds, when we developed the TLM 107. Yet we did exactly what our founder Georg Neumann would have done: We created the best microphone possible with the newest technology. The TLM 107 offers ultra low self-noise and is able to handle extreme SPLs without audible distortion. But it wouldn't be a true Neumann if it didn't sound gorgeous, too! The TLM 107's response is carefully balanced in each of its five directional patterns: omni, cardioid and figure-eight as well as the intermediate settings wide cardioid and hypercardioid. Additionally, it offers multiple low cut and pad options. The TLM 107 may be the most versatile microphone we've ever built.

HIGH DEFINITION

The TLM 107 is equipped with an all-new dual diaphragm capsule, specifically developed for this microphone. Its transient response is outstanding, and its polar patterns are exceptionally consistent for a large diaphragm capsule: The TLM 107 thus offers the same high definition sound in any setting. Regardless of the directional pattern selected, the on-axis response remains essentially linear up to 8 kHz. In other words: The TLM 107 excels at capturing the natural beauty of any vocalist, any instrument, anything you put in front of it.

FRESH IDEAS

The exterior design of the TLM 107 is an intentional departure from traditional Neumann styling. Its proportions may be classic, but its rounded edges give it a distinctly fresh and modern look. Its user interface is new, too: An elegant navigation switch allows you to select five directional patterns (omni, wide cardioid, cardioid, hypercardioid, figure-8), three pad options (0/-6/-12 dB), and three low cut settings (linear for bass instruments, 40 Hz for all other instruments, 100 Hz for vocals). The TLM 107 is incredibly flexible and able to capture anything from the faintest whisper to thunderous drums without adding noise or distortion.



Max SPL 141 dB

S/N Ratio 84 dB

Sensitivity 11 mV/Pa



TLM: CLEAR SOUND, POWERFUL BASS

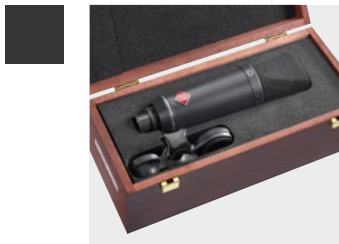
Our TLM series works with a transformerless output stage. This means: a clean and direct sound, very "close" to the acoustic source, and a powerful bass transmission all the way down to the lowest frequencies. Its transformerless output stage also makes the microphone resistant to electromagnetic fields and minimizes transmission losses.

THE PERFECT Guitar Female Vocals Brass Woodwind Male Vocals
Drums Bass Percussion Strings Piano You Name It MIC.



» NEUMANN.BERLIN

TLM 193



The TLM 193 is available in black with a swivel mount in a wooden box.

The swivel mount and elastic suspension serve to mount the microphone on a microphone stand. The elastic suspension and microphone stand is not part of the delivery scope. An adapter for all common microphone stand threads is included.

TLM 193



PURE SOUND, NO ATTITUDE. A TRUE PLUG-AND-PLAY MICROPHONE.

- Captures the natural beauty of any voice or instrument
- Tight cardioid pattern
- Uncolored sound on- and off-axis

RELAX AND BE YOURSELF

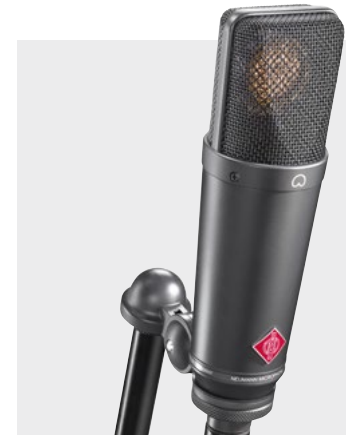
Recording doesn't have to be complicated! The TLM 193 is the ultimate plug and play microphone: Point it at any source and capture its sonic beauty. The TLM 193 adds nothing and hides nothing. And thanks to its tight cardioid pattern and linear response, the TLM 193 is surprisingly versatile.

REFERENCE QUALITY

Introduced in 1993 the TLM 193 was our first attempt at creating an affordable microphone for project studios and home users. Technically speaking, the TLM 193 is a streamlined version of our reference studio microphone TLM 170, noted for its supreme sonic integrity. The TLM 193 uses the same K 89 capsule, combining the smoothness of a large diaphragm capsule with the high resolution of a small diaphragm capsule. The TLM 193 offers great linearity both on- and off-axis. In other words, both the direct sound and the room ambience are captured authentically, without unwanted coloration.

THE BEAUTY OF SIMPLICITY

The TLM 193 may not be our best-known microphone, but it is universally loved by its owners. Why? Because it is so easy to use – just “aim and fire”. The TLM 193 has no practical limitations: It allows you to record even the faintest sounds without audible noise, and it can handle extremely loud sources without unwanted distortion. The TLM 193 covers an enormous dynamic range of 130 dB – that's about 10 dB more than even mastering grade AD-converters can handle! The TLM 193 thus offers you an ideal basis for clean recordings and shaping the sound as you wish in your DAW software.



TLM 193

Max SPL 140 dB

S/N Ratio 84 dB

Sensitivity 18 mV/Pa



TLM: CLEAR SOUND, POWERFUL BASS

Our TLM series works with a transformerless output stage. This means: a clean and direct sound, very “close” to the acoustic source, and a powerful bass transmission all the way down to the lowest frequencies. Its transformerless output stage also makes the microphone resistant to electromagnetic fields and minimizes transmission losses.

A TRUE PLUG-AND-PLAY MICROPHONE.



» NEUMANN.BERLIN

TLM 49



The TLM 49 is available in nickel with an elastic suspension.

The elastic suspension serves to mount the microphone on a microphone stand. The microphone stand is not part of the delivery scope. An adapter for all common microphone stand threads is included.

TLM 49



Prof. Recording Studio



Home Studio



Film/Voice Over



Concert Hall



Broadcast



Live Sound

CLASSIC VOCAL FINESSE. VINTAGE WARMTH FOR MODERN USERS.

- Microphone design inspired by the legendary M 49
- Classic tube microphone sound with 21st century technology
- Silky vocals with a gentle presence and a touch of class

THE SOUND OF YOUR FAVORITE RECORDS

The TLM 49 is a return to the sonic beauty of classic albums from the 50s and 60s. It captures the lush, silky clarity of our legendary tube microphones U 47 and M 49 and translates it for the 21st century: vintage Neumann sound, easy to use.

BRING OUT THE SOUL IN YOUR VOICE

We've developed the TLM 49 primarily as a vocal microphone. Its tailored response lends a silky presence to the human voice and makes it stand out, even in a busy arrangement. Its looks are classic, too: The TLM 49 brings back the iconic large headgrille of the legendary Neumann M 49 tube microphone. Yet we also added some modern ingredients: The TLM 49's all-new circuit design closely reproduces tube sound characteristics with reliable solid state technology. The TLM 49 is therefore much lower noise and lower maintenance than a vintage tube microphone. It is also much more affordable.

SOUNDS LIKE A RECORD

The TLM 49 uses the famous K 47 capsule, which was used in such Neumann classics as the M 49 and the U 47. Those were the legendary microphones that shaped the sound of countless albums from the 50s and 60s: big band and bebop jazz, the beat era and the birth of pop music as we know it. The TLM 49 recreates the lush sound of those groundbreaking records for today's studio owners. For added convenience, the TLM 49 is always "ready to record", with a fixed cardioid pattern and no switches to worry about. The TLM 49 is the perfect choice for vintage flavored vocals, speech and solo instruments.

VINTAGE SOUND THE MODERN WAY

The TLM 49 combines vintage sound with modern ease of use. We've painstakingly analyzed our historic tube microphones and recreated their behavior using reliable FET electronics. Like a tube microphone, the TLM 49 retains a marvelously clean tone at sound levels up to 110 dB, while soft saturation sets in at higher levels, slowly rising to 5% THD at 129 dB. Yet unlike its historic ancestors, the TLM 49 does not require a cumbersome external power supply but operates on P48 phantom power.



TLM 49

Max SPL **129 dB**

S/N Ratio **82 dB**

Sensitivity **13 mV/Pa**



TLM: CLEAR SOUND, POWERFUL BASS

Our TLM series works with a transformerless output stage. This means: a clean and direct sound, very "close" to the acoustic source, and a powerful bass transmission all the way down to the lowest frequencies. Its transformerless output stage also makes the microphone resistant to electromagnetic fields and minimizes transmission losses.

VINTAGE WARMTH FOR MODERN USERS.



» NEUMANN.BERLIN

TLM 67



The TLM 67 is available in a dual-color design of pearl gray and nickel in a wooden box.

Stand mount swivel or elastic suspension as well as the microphone stand have to be ordered separately.

TLM 67



Prof. Recording Studio



Broadcast



Film/Voice Over



Concert Hall



Live Sound

VINTAGE SOUND, RETRO STYLING. FLEXIBLE AND EASY TO USE.

- Microphone design inspired by the legendary U 67
- 1960s sound reimagined for today
- Beautifully balanced sound in three directional characteristics

BACK TO THE 60S AND INTO THE FUTURE

In the world of studio recording, 67 is an auspicious number: The legendary Neumann U 67 tube microphone was the studio workhorse of the 1960s. The new TLM 67 takes its classic sound signature and flexibility into the next century: vintage Neumann sound in three polar patterns with modern ease of use.

RETRO SOUND FOR TODAY

Like its ancestor, the U 67, the TLM 67 is an extremely versatile microphone, offering switchable polar patterns – omni, cardioid, and figure-eight – as well as selectable -10 dB pad and low cut options. The TLM 67 incorporates the same K 67 capsule as its historic predecessor, combining it with an all-new circuit design which closely reproduces vintage tube sound characteristics with reliable solid state technology. The result is a unique studio microphone which combines a carefully balanced response with a vibrant sound character.

SOMETHING OLD, SOMETHING NEW

Its exterior design is unique, too. The TLM 67's dual color finish combines the iconic Neumann headgrille in satin nickel with a pearl-gray body, thus linking past and contemporary aesthetics. The front of the microphone is graced by a three dimensional metal plate of Georg Neumann, who founded the Neumann company in 1928. The TLM 67 is a prime example of Neumann engineering: tradition, innovation and, above all, sonic excellence.

ANALOG SOUND FOR A DIGITAL WORLD

Like a tube microphone, the TLM 67 remains beautifully clean yet vibrant at low to medium sound levels below 105 dB. At higher sound levels, soft saturation sets in, creating rich harmonics. The TLM 67's saturation behavior thus restores a distinctly analog sound character in the world of digital recording. There's one thing we did not emulate, though: tube hiss. With a self-noise of only 11 dB(A) the TLM 67 is as quiet as you'd expect from a modern Neumann microphone.



TLM 67

Max SPL 125 dB

S/N Ratio 83 dB

Sensitivity 18 mV/Pa



TLM: CLEAR SOUND, POWERFUL BASS

Our TLM series works with a transformerless output stage. This means: a clean and direct sound, very "close" to the acoustic source, and a powerful bass transmission all the way down to the lowest frequencies. Its transformerless output stage also makes the microphone resistant to electromagnetic fields and minimizes transmission losses.

VINTAGE SOUND, RETRO STYLING.



KM 184



VARIANTS:



All Series 180 microphones are available with either matte black or nickel finish with a swivel mount and a foam windscreen. We also offer the miniature microphones as a stereo set in a wooden box.

The swivel mount serves to mount the microphone on a microphone stand, a table stand, etc. A microphone stand is not part of the delivery scope. An adapter for all common microphone stand threads is included. For more accessories see also on neumann.com/

KM 184 (SERIES 180)



Concert Hall



Prof. Recording Studio



Home Studio



Film/Voice Over



Broadcast



Live Sound

AUTHENTIC, VIBRANT, TRANSPARENT: THE PERFECT HIGH-RESOLUTION INSTRUMENT MICROPHONE.

- High-precision tool for instruments and voice
- Reference class small diaphragm microphone
- Also available in stereo sets

ZERO TOLERANCE: THE MASTER CLASS FOR INSTRUMENTAL RECORDINGS

Without any doubt, you must have heard the KM 184 in various recordings, as it is the go-to instrument microphone in countless studios around the globe.

Its strengths: A natural sound reproduction (also of voices), an entirely un-colored and authentic sound character and the ability to handle high sound levels.

Experienced users often describe the sound of our small diaphragm microphone as „fresh“ and „vivid“. This is – among other factors – due to a slight treble lift around 9 kilohertz. The KM 184 is an experienced all-rounder, a mic for all seasons. It captures virtually any instrument with amazing complexity and depth of sound.

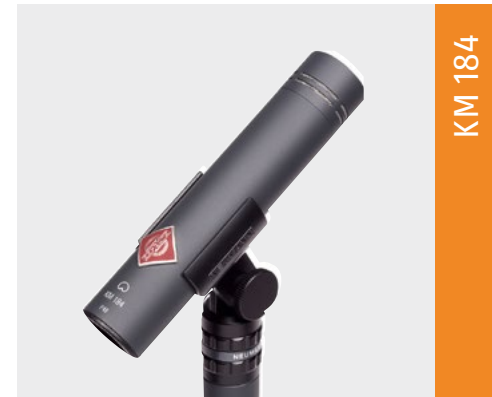
Another advantage: thanks to the extremely tight production tolerances, all KM 184 microphones produce a very consistent sound. Therefore, they can easily be used as a stereo pair with exact spatial imaging for all stereo recording methods.

SERIES 180

The KH 184 is part of the *Series 180*. This series consists of three compact miniature microphones with patterns that satisfy the demands of all common studio applications.

Because of its optimized mechanical construction and conscious omission of modularity, which is unnecessary in many cases, the *Series 180* is predestined for economy-minded production and home recording studios, but also for a very wide range of tasks in the radio and television sector.

The KM 183 omnidirectional and KM 185 hypercardioid microphones are based on the tremendously successful KM 184 cardioid microphone, which has become a standard within the global studio community in just a very short time.



Max SPL **138 dB**

S/N Ratio **81 dB**

Sensitivity **15 mV/Pa**



Also available as digital version (AES42):
KM D + KK 184 (modular)

THE MASTER CLASS FOR INSTRUMENTAL RECORDINGS.



VARIANTS:



The KMS microphones are available in silver and black. They are delivered with a matching stand clamp, packaged in a smart road-ready cushioned nylon bag. A microphone stand is not part of the delivery scope. An adapter for all common microphone stand threads is included.

KMS SERIES



Live Sound



Broadcast



Home Studio



Film/Voice Over

STUDIO SOUND ON STAGE. STAGE FEELING IN THE STUDIO.

- Neumann Sound made stage-compatible
- Optimal speech intelligibility
- High feedback resistance

THE KMS SERIES: REFERENCE CLASS STUDIO SOUND FOR THE BIG STAGE

The KMS series links two worlds: it makes the delicate, silky condenser sound suitable for the stage in a sturdy package. At the same time, all the three microphones of the KMS series double as ingenious companions in your home studio.

While live microphones usually operate with dynamic capsules, we designed the KMS series as “studio sound for the stage”. That’s why we chose condenser capsules. Due to their construction they capture the voice more vividly, with greater detail and a wider frequency response. This uncolored high definition sound doesn’t only convince on stage, it also delivers reference class sound in the home studio for vocals, acoustic guitars, and brass instruments with superior elegance and transparency.

THREE VERSIONS FOR A TAILOR-MADE SOLUTION

All versions share a remarkably uncolored off-axis response – a great advantage, especially for in-ear monitoring on stage.

THE KMS 104

The KMS 104 and KMS 104 plus come with a cardioid pattern which perfectly attenuates sound from the rear.

THE KMS 104 PLUS

The KMS 104 plus has a more prominent bass range and is especially optimised for female Rock and Pop voices.

THE KMS 105

The supercardioid pattern of the KMS 105 attenuates sound from the sides and the rear, which makes it optimally suited for loud stage environments.



KMS SERIES

Max SPL **150 dB**

S/N Ratio **76 dB**

Sensitivity **4,5 mV/Pa**



KMS 104



KMS 104 plus



KMS 105



Also available as digital version (AES42):
KMS D SERIES

STUDIO SOUND ON STAGE. STAGE FEELING IN THE STUDIO.

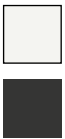


▶▶ NEUMANN.BERLIN

KH 80 DSP



VARIANTS:



KH 80 DSP A G EU / US / UK / CCC
Analogue input, metallic anthracite (RAL 7021),
country-specific mains cable

KH 80 DSP A W EU / US / UK
Analogue input, white (RAL 9016),
country-specific mains cable

Please refer to ▶ www.neumann.com
for the complete range of accessories.
The "Hardware Mounting Matrix"
shows how to connect the various
LH brackets and adapters together.
Detailed mechanical drawings are also
available.

KH 80 DSP



Project/Recording Studio



Computer Desktop



Editing Suites



Outside Broadcast

THE NUMBER 1 FOR 0 COMPROMISES.

- New DSP-engine optimizes output to achieve reference class sound
- Ready for fully-automatic alignment to the room using the Neumann.Control software
- Mathematically modeled dispersion to deliver excellent detail in any surroundings

THE ART OF NEUTRAL STUDIO SOUND – NOW DIGITALLY REMASTERED

We have calculated every soundwave. We have perfected low-distortion materials. We have optimised the drivers with our years of experience and hand-selected every component. The system's perfection comes from its digital heart: Our DSP engine converts every sound to a reference quality in every environment – so no detail gets lost on the way.

THE PERFECT SOUND OF MATHEMATICS AT WORK

We know every nuance, every surface and every angle of the KH 80 DSP. It sounds so pure, because we are directing every soundwave so precisely. The KH 80 DSP's design is based on computer simulations that calculate with incredible accuracy. Our Mathematical Modeled Dispersion Waveguide (MMD™) provides our Studio Monitoring series with a solid base for precise sound direction. Doing your sums properly has never sounded so good.

THE BIGGEST VARIABLE IS YOUR ROOM. AND WE HAVE THE SOLUTION.

It might be a project studio, an outside broadcast van, or just the corner of a building: The room defines the sound. Surfaces and corners in the room cause interference, diffraction, reflection, and refraction: all are forms of distortion. For a really true sound, you normally need expensive equipment plus plenty of time and expertise to align it correctly – or smart algorithms. Our DSP engine optimizes the sound output, delivering quality way above the price-tag. And you do not need to be an expert use it. The KH 80 DSP is ready for our upcoming software Neumann.Control – which will be available for tablets and computers starting from mid-2017 – allowing you to align and control the monitor with a swipe of your finger or the click of a mouse.

PROFESSIONAL STANDARDS FOR EVERYONE

Highest quality components, high-end protection systems and performance reserves are what you would expect from this studio class product. Its quality and design makes the KH 80 DSP a flexible near-field studio monitor, which delivers professional-quality sound wherever you need it. It can be used in studios, editing rooms or outside broadcast trucks. Some of our customers like it so much, they use KH 80 DSPs in their living rooms. And why not? Our latest monitor delivers digital precision for a masterpiece of analogue technology: your ears.

Compact polycarbonate composite cabinet

- ▶ Robust package for a long life
- ▶ No standing wave resonances



KH 80 DSP

- 1** Powerful alloy fabric dome
 - ▶ Low-distortion high-frequency reproduction
- 2** Elliptical Mathematically Modelled Dispersion™ (MMD™) waveguide
 - ▶ Smoother off-axis response
 - ▶ More forgiving of diverse acoustical environments
- 3** Two-colour + dimmable Neumann logo
 - ▶ Displays operation status and activation of the extensive protection system
- 4** In-house modelled long-throw composite sandwich cone bass driver with Extremely Linear Force Factor™ (ELFF™)
 - ▶ Damping of break up modes
 - ▶ Low distortion at high sound levels
- 5** Robust metal grille
 - ▶ Protects against mechanical damage
- 6** Large front panel ports
 - ▶ Reduced bass compression and easier to mount in tight spaces such as OB vans and small studios

THE NUMBER 1 FOR 0 COMPROMISES.



View of connectors

1 Standby function

- ▶ Reduces power consumption when product is not in use

Control function

- ▶ Use the back panel controls or the control set defined by the Neumann.Control software

2 4-position low-mid acoustical control

- ▶ Compensates for nearby desktops
- ▶ Fast acoustical set up in mobile applications

3 Wide range input gain and output level controls

- ▶ Easier interfacing with signal sources

4 Mounting hardware options

- ▶ More flexibility in mounting cabinets in more diverse locations
- ▶ Backwards compatibility with previous models

5 Double insulated universal switched-mode power supply (100 ... 240 V)

- ▶ One version works in any country and robust to poor quality mains supply
- ▶ Ground loops are impossible

6 Network connector

- ▶ Uses standard IP protocol and your existing network infrastructure
- ▶ Loudspeaker system can be controlled via the Neumann.Control software

7 Analogue input socket can accept XLR or 6.3 mm (1/4") Jack plugs

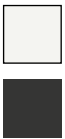


▶▶ NEUMANN.BERLIN

KH 120



VARIANTS:



KH 120 A G EU / US / UK / CCC
Analog input, metallic anthracite (RAL 7021),
country-specific mains cable

KH 120 D G EU + US / UK / CCC
A/D input, delay feature, metallic anthracite (RAL 7021),
country-specific mains cable

KH 120 A W
Analog input, white (RAL 9016), EU and UK mains cable

Please refer to ▶ www.neumann.com
for the complete range of accessories.
The "Hardware Mounting Matrix"
shows how to connect the various
LH brackets and adapters together.
Detailed mechanical drawings are also
available.

KH 120



Project /Recording Studio



Computer Desktop



Editing Suites



Outside Broadcast

BELIEVE WHAT YOU HEAR.

- Perfect for tracking, mixing and mastering in music, broadcast, project and post-production studios.
- Mathematically modeled dispersion to deliver excellent detail in any surroundings
- Production consistency: Any KH 120 is “pairmatched” to any other KH 120

THE NEUMANN KH 120

The KH 120 studio monitor is designed for use as a near-field loudspeaker or as a rear loudspeaker in larger multi-channel systems. The KH 120 represents the latest in acoustic and electronic simulation and measurement technologies to ensure the most accurate sound reproduction possible.

It has a Mathematically Modeled Dispersion™ waveguide (MMD™), flexible acoustical controls, analog class-AB amplifiers, various input formats and an extensive mounting hardware range. All of this provides the user with the maximum versatility over a wide variety of acoustic conditions, source equipment, and physical locations.

A subwoofer, such as the Neumann KH 810 with its 7.1 High Definition Bass Manager™ or KH 805 with 2.0/0.1 Bass Manager, can be added to deepen the low-frequency response to 18 Hz and increase the system's maximum output level. The KH 120 is perfect for tracking, mixing and mastering in music, broadcast, project and post-production studios.

! MORE FEATURES:

Wide horizontal dispersion

- ▶ Freedom of movement across the mixing console

Narrow vertical dispersion

- ▶ Reduces reflections off the mixing console

One-piece front panel with no discontinuities

- ▶ Reduced diffraction and smoother frequency response

Powerful analog amplifiers with large headroom

- ▶ Improved transient response

Separate woofer, tweeter electronic peak limiters and thermal-protection circuitry

- ▶ High reliability

Compact aluminum cabinet (magnetically shielded)

- ▶ Minimizes resonances, better heat dissipation, long life



KH 120

1 Powerful alloy fabric dome

- ▶ Low-distortion high-frequency reproduction

2 Elliptical Mathematically Modelled Dispersion™ (MMD™) waveguide

- ▶ Smoother off-axis response
- ▶ More forgiving of diverse acoustical environments

3 Composite sandwich cone

- ▶ Damping of break up modes

Long throw bass driver

- ▶ Low distortion at high sound levels

4 Two-colour + dimmable Neumann logo

- ▶ Displays operation status and activation of the extensive protection system

5 Robust metal grille

- ▶ Protects against mechanical damage

6 Large front panel ports

- ▶ Reduced bass compression and easier to mount in tight spaces such as OB vans

KH 120 – BELIEVE WHAT YOU HEAR.



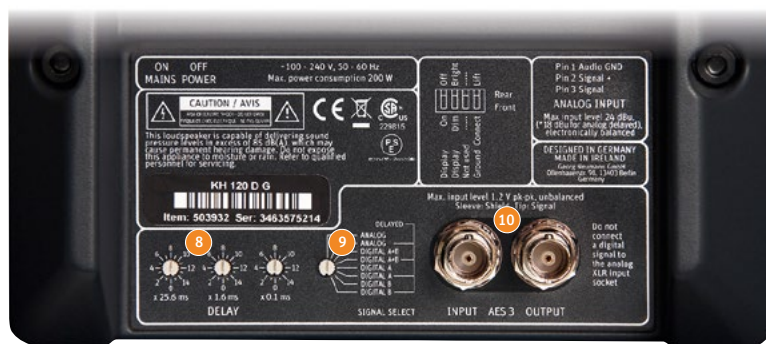
NEUMANN.BERLIN

KH 120

A VERSION



D VERSION



1

4-position bass, low-mid and treble acoustical controls

▶ More control in diverse acoustical environments

2

Wide range input gain and output level controls

▶ Easier interfacing with signal sources

3

New mounting hardware options

▶ More flexibility in mounting cabinets in more diverse locations

4

Display dimmer

▶ For low lighting level conditions or behind the screen applications

5

Ground lift

▶ Reduced noise in electrically noisy environments and overcomes ground loops

6

Universal switched-mode power supply (100 ... 240 V)

▶ One version works in any country and robust to poor quality mains supply

View of connectors and control switches:



7

XLR analog input

▶ Excellent CMRR results in very high reduction of unwanted noise induced in the external cables

8

Lipsync delay (0 ... 10/12 frames)*

▶ To align audio and video signals

9

Time-of-flight delay (0 ... 400 ms)*

▶ To compensate for listening distance differences

9

Signal select

▶ Analog, Digital A, Digital B, Digital A+B (all available with and without delay)

10

BNC input and buffered BNC output / 24 bit, 192 kHz, AES3, S/P-DIF*

▶ Compatible with commonly used digital signals*

	KH 120 A	KH 120 D
ACOUSTICS		
-3 dB free field frequency response	52 Hz ... 21 kHz, ± 3 dB	
Pass band free field frequency response	54 Hz ... 20 kHz, ± 2 dB	
Self-generated noise (with controls set to 100 dB SPL and 0 dB)	< 20 dB(A) at 10 cm	
Total harmonic distortion < 0.5 % at 95 dB SPL at 1 m	> 100 Hz	
Max. SPL in full space / calc. in half space at 3% THD at 1 m	105.1 / 111.1 dB SPL (averaged 100 Hz ... 6 kHz)	
Bass Capability (max. SPL calc. in half space at 3% THD at 1 m)	104.8 dB SPL (averaged 50 ... 100 Hz)	
Max. short term SPL with IEC-weighted noise (IEC 60286-5) at 1 m, in typical listening conditions	107 dB(C) SPL	
Max. short term SPL with music material at 2.3 m, in typical listening conditions (pair)	97 dB(C) SPL (full range) 104 dB(C) SPL (with subwoofer)	
Max. long term SPL with pink noise at 2.3 m, in typical listening conditions (single/pair)	88 / 93 dB(C) SPL (full range) 89 / 94 dB(C) SPL (with subwoofer)	
ELECTRONICS		
Woofer/Tweeter amplifier, cont. (peak) output power*	50 W (80 W) / 50 W (80 W)	
Controller design	analog, active	
Crossover frequency	2.0 kHz	
Crossover slope	24 dB/oct., 4th order	
Equalization: Bass / Low-Mid / High	0, -2.5, -5, -7.5 dB / 0, -1.5, -3, -4.5 dB / +1, 0, -1, -2 dB	
Protection circuitry	Peak Limiter: Low; Thermo Limiter: Low, High	
Infrasonic filter frequency; slope	30 Hz; 6 dB/oct.	
ANALOG INPUT		
Impedance, electrically balanced	XLR, > 10 kΩ	
Input gain control (sensitivity)	0 dB to -15 dB	
Output level control	94, 100, 108, 114 dB SPL	
CMRR	> 56 dB @ 15 kHz	
DIGITAL INPUT/OUTPUT		
Format BNC	-	AES3, S/P-DIF
Impedance BNC, unbalanced	-	75 Ω (input/output)
Input switching	-	Analog, Digital A, Digital B, Digital A+B (all available with and without delay)
Digital converter: resolution, design	-	16 ... 24-bit DAC, ΔΣ
sampling rate	-	32 ... 192 kHz
Digital sensitivity	-	-18 dBFS
D-A dynamic range	-	120 dB
Audio-Video/lip sync and Time-of-Flight delay range	-	0 ... 400 ms
Audio-Video/lip sync max. frames	-	0 ... 10 (40 ms) frames 0 ... 12 (33 ms) frames
Resolution: time/distance	-	0.1 ms / 3.4 cm (1 3/8")
Latency D-A (A-D-A)	-	0.22 - 1.85 ms (0.54 ms)
DISPLAYS AND MAINS POWER		
Displays and indicators: power on	Neumann logo "White", dimmable: 100%/60%/30%/0%	
limit/clip	Neumann logo "Red", dimmable: 100%/60%/30%	
digital delay setting acknowledgement	-	Neumann logo "Red" 3 flashes
digital error	-	Neumann logo "Red" flash
Mains Power Supply: voltage; frequency	100 - 240 V-; 50 - 60 Hz	
Power consumption: Idle / Full output	20 W / 200 W	40 W / 200 W
MECHANICS		
Height x width x depth, mm (inches)	277 x 182 x 220 mm (10 7/8" x 7 1/8" x 8 5/8")	
Internal net volume / external volume	6.5 Liter / 9.7 Liter	
Weight	6.4 kg (14 lbs 2 oz)	6.5 kg (14.3 lbs)
Drivers: Woofer / Tweeter	130 mm (5.25") / 25 mm (1"), both magnetically shielded	
Mounting points	2 x M8 on rear panel	
Cabinet surface finish, color: custom	Painted aluminium, Metallic Anthracite (RAL 7021) Powder-coated aluminium, White (RAL 9016)	

* THD+N < 0.1% with limiter deactivated

▶▶ Additional technical information is available at www.neumann.com



» NEUMANN.BERLIN

KH 805



KH 805 A G
10" Active Studio Subwoofer
with 2.0 / 0.1 Bass Manager,
Metallic Anthracite

KH 805



Project/Recording Studio



Computer Desktop



Editing Suites



Outside Broadcast

EXTENDING DOWN TO NEW DEPTHS.

- Bass extension for loudspeakers down to 18 Hz
- Increasing the maximum SPL of loudspeakers by up to 8 dB
- Decreasing harmonic and intermodulation distortion of loudspeakers
- Reproducing the LFE channel
- Reproducing the “Sub” signal of a bass managed multichannel source
- Making a Plane Wave Bass Array™ system
- Working as an extension for KH 810, KH 870 and KH 805 subwoofer systems

THE NEUMANN KH 805

Based on the excellent acoustical performance of the KH 810, the KH 805 is the optimal choice to be used in stereo applications, for example in combination with the KH 80 DSP, KH 120 or KH 310.

The KH 805 has a unique 2.0/0.1 Bass manager which enables it to be used in many different applications. There are four routing modes to ensure maximum flexibility. Fourth order crossovers and adaptable acoustical controls allow for seamless system integration, and the bass management function can be remotely controlled.

DEEP SOUND

The KH 805 extends the bass response of your monitoring system to bring life to the very deepest tones, notes and effects. For Electronic dance music the full punch of “slammin’ bass” is rendered in its entirety. In classical music, a church organ, piano, tympani or double bass can be reproduced faithfully and with its full dynamic range. In movies, special effects take on new life by immersing the listener in an audio experience befitting the high resolution of the images on the screen.

STEREO

- ▶ 2 x KH 80 DSP + KH 805
- ▶ 2 x KH 120 + KH 805

5.1, 6.1 OR 7.1 SURROUND

- ▶ 5, 6 or 7 x KH 80 DSP + KH 805* or KH 810
- ▶ 5, 6 or 7 x KH 120 + KH 805* or KH 810
- ▶ 3 x KH 120 + 2, 3 or 4 x KH 80 DSP + KH 805* or KH 810

3D 9.1 AUDIO SYSTEMS

- ▶ 9 x KH 80 DSP + 2 x KH 805* or 2 x KH 810
- ▶ 9 x KH 120 + 2 x KH 805* or 2 x KH 810
- ▶ 5 x KH 120 + 4 x KH 80 DSP + 2 x KH 805* or 2 x KH 810

* Use of the KH 805 in surround and 3D systems assumes there is bass management in the source equipment.



KH 805

KH 805 – EXTENDING DOWN TO NEW DEPTHS.



Solid cabinet construction

▶ Well-braced cabinet with extremely low tuning frequency minimizes unwanted resonances

▶ Long excursion, low distortion, magnetically shielded 10" driver

▶ Bass compression is minimized using large capacity low turbulence dual reflex ports

▶ Latest high efficiency, low heat dissipation power amplification techniques

▶ Electronics can be remote located (REK 3) for reduced cabling and ease of installation and use



2.0 / 0.1 Bass Manager

▶ Can be used for stereo and multichannel applications

▶ Bass management with 4th order, 80 Hz crossover: compatible with typical systems

▶ Bass manager can be bypassed using a simple switch or footswitch

Installation flexibility

▶ 4-mode operation for many application needs

▶ Sum output for multiple subwoofer systems: higher SPL, decreased system distortion, Plane Wave Bass Array™ (PWBA™) to reduce lateral room modes

▶ Extensive Acoustical Controls: Low cut, parametric EQ, phase, input/output level

▶ Switchable mains voltage

▶ Input Ground Lift

ACOUSTICS

KH 805

-3 dB free field frequency response	18 ... 300 Hz, ± 3 dB
Pass band free field frequency response	19 ... 300 Hz, ± 2 dB
Self-generated noise	< 20 dB(A) at 10 cm
Sine wave output with a THD < 0.5 % at 1 m	95 dB SPL (> 40 Hz)
Max. SPL in half space at 3% THD (averaged between 40 and 90 Hz)	110.7 dB SPL
Max. SPL with pink noise in half space at 1m, linear	112 dB SPL

ELECTRONICS

Amplifier, total cont. (peak) output power*	160 W (200 W)
Controller design	Analog, active
Main channel crossover frequency	80 Hz
Crossover slope	24 dB/oct.
Equalization: Low cut	30 Hz, 0 ... -12 dB
Parametric Equalizer:	Bypassable
Gain	+4 ... -12 dB
Frequency	20 ... 120 Hz
Q	1 ... 8
Time of flight phase adjustment	0 ... -315° in 45° steps
Bass Management Remote Control	Bass management on/off optional via a standard foot switch on a 6.3 mm jack
Protection circuitry	Excursion and Thermo Limiters
Infrasonic filter frequency; slope	6.5 Hz; 12 dB/oct.

ANALOG INPUTS AND OUTPUTS

Input/Output channels	2.0 or 0.1 / 2 + 1
Impedance, electrically balanced	XLR, 13 k Ω
Input sensitivity	94, 100, 108, 114 dB SPL at 1 m for a 0 dBu input level
CMRR	> 56 dB @ 15 kHz
Interchannel isolation (1 kHz), level matching	< -95 dB, ± 0.1 dB
Dynamic range, THD+N	119 dB(A), better than 0.001%
Signal routing modes	Right, LFE 120 Hz, Wide, Daisychain
Gain Control	+2 ... -12 dB

DISPLAYS AND MAINS POWER

Displays and indicators: power on	Green LED
limit / clip	Red LED
bass management active	Green LED
Mains power	220 ... 240 V~ or 100 ... 120 V~, switchable
Power consumption – Idle / Full output	14 W / 280 W

MECHANICS

Height x width x depth	360 x 330 x 645 mm (14.2" x 13" x 25.4")
Internal net volume / External volume	41.5 liters / 76.6 liters
Weight	26.0 kg (57.2 lbs)
Drivers, magnetically shielded: Woofer	265 mm (10")
Cabinet surface finish, color: custom	Painted, Metallic Anthracite (RAL 7021)
Baffle cover	Included metal grille

* THD+N < 0.1 % with limiter deactivated

EXCELLENCE IN AUDIO RECORDING

PLEASE REFER TO
WWW.NEUMANN.COM
FOR ADDITIONAL
PRODUCT INFORMATION.

Welcome to your NEUMANN.BERLIN Partner: