NEUMANN.BERLIN



MICROPHONES

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Made in Germany

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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 90 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 products 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. 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 is a servicing pledge which is hard to equal.



The U 47 (1949) – a legendary Neumann microphone

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 products 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 Neumann disc cutting lathe in the 80s

A COMPANY WITH A LONG HISTORY

The company that was founded in Berlin in the year 1928 was also dedicated for a long time to 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 rechargable 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.

The company headquarters, with the development, marketing, sales and service departments, continues to be located in Berlin. Since 2010, Neumann offers this expertise in electro-acoustic transducer technologies to the studio monitoring market, and provides optimum solutions to its customers in the areas of TV and radio broadcasting, recording, and audio productions. The first Neumann studio headphone was introduced at the beginning of 2019.

Neumann now stands for the highest quality at both ends of the audio production chain: »Best Input and Best Output«.



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

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.



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

EXCELLENCE IN SOUND.





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 SET



Prof. Recording Studio | Home Studio | Film/Foley/Voice Over | Concert Hall | Broadcast | Live Show (PA)

THE SOUND OF OUR 1950S TUBE CLASSICS RECREATED WITH TROUBLE FREE FET CIRCUITRY

- Same capsule design as the legendary U 47 and M 49
- Optimized for a classic, silky vocal sound
- Tube sound characteristics from reliable FET circuitry
- Classic look with large M 49 headgrille



TLM 49 Set

Max SPL 129 dB

S/N Ratio 82 dB

Sensitivity 13 mV/Pa

CLASSIC SOUND FOR TODAY'S ENGINEERS

The TLM 49 brings back the vintage tone of Neumann's post-war classics. The TLM 49 uses the same K 47 capsule and the iconic large headgrille design of Neumann's legendary M 49, but instead of electron tubes the TLM 49 relies on trouble free FET circuitry with a special sound design for smooth vocals and acoustic instruments with timeless elegance.

VINTAGE SOUND WITH NEW TECHNOLOGY

Many engineers, these days, long for the smooth sound of classic tube microphones of the 1950s. Unfortunately, vintage originals come at staggering prices and are often in need of maintenance. But for those who want a recording tool rather than a collector's item, Neumann has developed an elegant solution: The TLM 49 combines the sonic excellence of Neumann's legendary U 47 and M 49 microphones with the convenience and high reliability of a modern phantom powered microphone. Its looks are classic, too!

As the model number implies, the TLM 49 is inspired by its famous precursor, the legendary Neumann M 49, a microphone associated with countless jazz and pop recordings of the 1950s and 60s. The TLM 49 shares the same large, acoustically open headgrille and the same large diaphragm condenser capsule design. This classic K 47 capsule, renowned for its unsurpassed sonic elegance, was also used in the Neumann U 47, the vocal mic of choice for Frank Sinatra, the Beatles, and scores of famous artists up to the present day.

RE-ENGINEERING THE PAST

The main difference between the TLM 49 and its famous predecessors lies in its electronic circuit. Instead of electron tubes, the TLM 49's head amplifier uses reliable transformer-less solid state technology – yet with a special sound design that closely reproduces the sonics of tube circuits. For instance, the TLM 49 intentionally produces soft saturation at higher sound pressure levels, resulting in a seemingly low max SPL figure of 110 dB for 0.5% THD, rising slowly to 5% at 129 dB SPL. The TLM 49 thus captures the sound and dynamic behavior of its legendary precursors without the inconvenience of an external PSU or expensive tube replacements, yet with a substantially improved self-noise figure of only 12 dB-A.

APPLICATIONS

The TLM 49 has a fixed cardioid pattern and is designed mainly as a microphone for vocalists, but its clear bass and superb midrange with a gentle presence boost above 2 kHz will produce excellent results with various instruments, too, such as acoustic guitar and upright bass.

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.





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/Foley/Voice Over | Concert Hall | Live Show (PA)

THE SOUND OF THE 60S REIMAGINED: CLASSIC CAPSULE TECHNOLOGY PLUS RETRO SOUND DESIGN.

- Same capsule as the legendary U 67 microphone
- Three polar patterns
- Tube sound characteristics from reliable FET circuitry
- Unique dual color retro look



TLM 67

Max SPL 125 dB

S/N Ratio 83 dB

Sensitivity 18 mV/Pa



THE SOUND OF THE 1960S REINVENTED

The TLM 67 captures the spirit of Neumann's classic U 67, which defined the sound of the 1960s. But instead of electron tubes the TLM 67 relies on trouble free FET electronics with a special sound design for a gorgeous retro tone. Like its predecessor, the TLM 67 is a versatile studio workhorse with three polar patterns, pad and low cut options.

CLASSIC SOUND WITH MODERN CONVENIENCE

Today's concept of the modern studio microphone is still very much defined by Neumann's classic U 67. Introduced in 1960, it offered an essentially linear frequency response in three polar patterns as well as pad and low cut options for then-new close miking techniques. The U 67 was (and still is!) a true studio workhorse, and many top engineers consider it their »desert island« microphone. However, vintage originals, these days, come at collectors' prices, out of reach for young engineers and musicians. The TLM 67 is an attractively priced alternative.

The TLM 67 shares many of the U 67's key features, including its elegant shape and the famous tapered headgrille, which has since become iconic for the Neumann brand. What's more, the TLM 67 uses the same large diaphragm capsule as its legendary predecessor, the classic K 67 capsule, also used in the Neumann U 87 A.

REIMAGINING THE SOUND OF THE 60S

Instead of the U 67's tube electronics, the TLM 67 has a transformerless head amplifier, built with highly reliable 21st century solid state technology – yet with a retro twist! The TLM 67's circuit may be modern, but it meticulously reproduces the sound of the 1960s. This results in a seemingly low max SPL figure of 105 dB (in cardioid mode) for 0.5% THD, but, like in a tube circuit, distortion rises gently to 5% THD for 125 dB SPL. The TLM 67 thus captures the sound character and dynamic behavior of its famous predecessor without the use of tubes and without the inconvenience of a clunky PSU box and multipin cables.

Visually, too, the TLM 67 has a retro touch with a unique dual color scheme, combining a capsule head in classic satin nickel with a stylish pearl-gray body. Released in 2008, the TLM 67's front is graced by a metal emblem of our founder, Georg Neumann, commemorating the company's 80th anniversary.

APPLICATIONS

Just like its legendary precursor, the TLM 67 is a universal studio microphone with three directional patterns – omni, cardioid, and figure-8 – as well as low cut and pad options. A true workhorse! Its unique tube-like midrange character makes the TLM 67 is an excellent microphone for vocals and spoken word. Thanks to its essentially linear frequency response, it is also a versatile microphone for a wide rage of instruments, such as acoustic and electric guitar, piano, percussion, drums overheads, and much more.

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 SOUND OF THE 60S REIMAGINED.



VARIANTS:







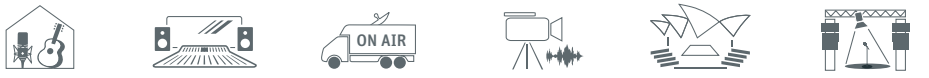




The TLM 102 is available in nickel and black with a swivel mount. We also offer sets with a color-matching elastic suspension to protect the microphone against rumble and impact noise.

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 · Prof. Recording Studio · Broadcast · Film/Foley/Voice Over · Concert Hall · Live Show (PA)

SMALL SIZE – BIG SOUND: NEUMANN'S MOST AFFORDABLE LARGE DIAPHRAGM MICROPHONE

- True Neumann quality at a very affordable price
- Very low self-noise
- Handles extreme SPLs without distortion
- Integrated pop shield



TLM 102

Max SPL 144 dB

S/N Ratio 82 dB

Sensitivity 11 mV/Pa



SMALL, SMART & POWERFUL

The TLM 102 brings Neumann quality to even the smallest studio. Like its more expensive siblings, the TLM 102 combines technical excellence with a beautifully balanced sound for silky vocals, crisp guitars and powerful drums. With its cardioid pattern and an integrated pop screen the TLM 102 is a joy to use, even for novices.

THE PERFECT INTRODUCTION TO THE NEUMANN SOUND

The TLM 102 is Neumann's most affordable large diaphragm condenser microphone. And, of course, it is a true Neumann, designed and manufactured in Germany with great attention to every detail. Compared to more expensive Neumann microphones, the TLM 102 is reduced in size and features, but Neumann would never compromise on sound quality. Despite its affordable price, the TLM 102 has a very attractive look with a gleaming chrome ring between a classic tapered headgrille and the famous Neumann diamond.

SMART LOOKS – SMART ENGINEERING

The TLM 102 sounds as smart as it looks! Its newly developed large diaphragm condenser capsule has all the qualities that made Neumann microphones the first choice in recording studios all over the world: a clear and focused sound with superb definition. Due to its remarkably linear response across the entire midrange, the TLM 102 is able to capture the authentic character of any voice or instrument, enhanced by a slight lift around 10 kHz for silky highs. The TLM 102 has gorgeous bottom end, too, enriched by the well-controlled proximity effect of a large diaphragm cardioid capsule. A joy for every singer!

The TLM 102's technical performance is impressive, too. Its self-noise of only 12 dB-A is much lower than the ambient noise in even a very quiet room. At the same time, the TLM 102 is capable of handling extreme sound pressure levels of up to 144 dB free from distortion. As a member of the TLM range, the TLM 102 is equipped with a transformerless output stage, which means: powerful bass, even at highest signal levels, and a very direct sound without transmission losses.

BIG SOUND FOR SMALL STUDIOS

Due to its enormous dynamic range of 132 dB and a remarkably uniform cardioid pickup pattern, the TLM 102 is a very easy to use microphone for home and project studios, and also for demanding live applications. Its uncolored sound and fast transient response make the TLM 102 an excellent choice for male and female vocals as well as a wide range of instruments, such as acoustic and electric guitar, bass guitar and double bass, drums, percussion, brass, saxophone. The TLM 102 is a true workhorse for any small studio!

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.



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.

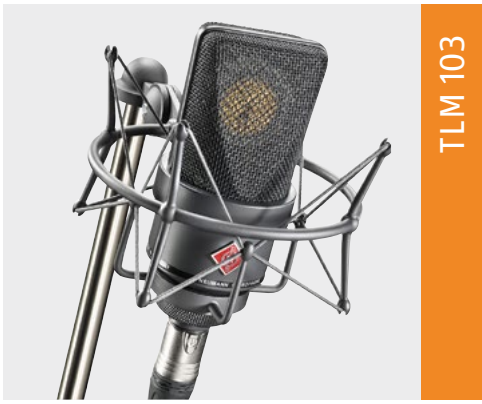
TLM 103



Prof. Recording Studio | Home Studio | Broadcast | Film/ Foley/ Voice Over | Concert Hall | Live Show (PA)

A MODERN STUDIO STANDARD

- Capsule design derived from the legendary U 87 A
- Consistent cardioid pattern
- Broad presence boost for enhanced sound definition
- Extremely low self-noise



TLM 103

TLM 103:

Max SPL 138 dB

S/N Ratio 87 dB

Sensitivity 23 mV/Pa



A MODERN CLASSIC

The TLM 103 has quickly become one of the biggest successes in Neumann's history. Its pristine, clear sound is a modern update on the classic U 87. The TLM 103 is a transformerless cardioid condenser microphone with a gentle presence boost for a stunningly direct sound with breathtaking definition and ultra low noise.

THE NEW STANDARD

Introduced in 1997 as an affordable alternative to the venerable U 87, the TLM 103 has since become a modern classic in its own right. Today, the TLM 103 defines the standard by which contemporary studio microphones are measured. Its classic tapered headgrille design gives the TLM 103 a distinct Neumann look.

The TLM 103 is a cardioid microphone with a large diaphragm condenser capsule derived from the classic K67/87 capsule of the legendary Neumann U 87. However, the TLM 103 has a slightly more modern voicing with a wide presence boost for frequencies above 5 kHz. Its very direct yet refined sound is perfect for vocals, and solo instruments that pop out of the mix without effort. Of course, the TLM 103 also has the famous authoritative midrange that has become the hallmark of Neumann microphones and made them the number one choice in studios around the world. A unique feature of the TLM 103 is its impressively deep yet controlled low end, perfect for sonorous voices and powerful bass instruments.

TECHNICAL EXCELLENCE

The TLM 103 has set new standards for technical performance, too. With an incredibly low self-noise of only 7 dB-A, it is among the quietest microphones available. And its high sensitivity of 23 mV/Pa, ensures ultra low noise even with budget preamps and audio interfaces or vintage tube equipment.

At the same time, the TLM 103 can handle enormous sound pressure levels of up to 138 dB without the need for preattenuation. Its vast dynamic range of 131 dB makes the TLM 103 a very easy to use studio microphone as it will capture anything from a soft whisper to a thunderous bass drum without adding noise or distortion.

As a member of Neumann's TLM series, the TLM 103 works with a transformerless output stage, which minimizes transmission losses and ensures a very immediate, uncolored sound, true to the original, as well as a clear, powerful bass response, even at highest signal levels.

APPLICATIONS

The TLM 103 was primarily designed for project studios and broadcast use, but due to its outstanding performance was soon embraced by renowned studios as a more modern sounding alternative to the U 87 e.g. for speech, vocals, drums, guitar amps, and piano. The TLM 103 is also often used as a spot mic in classical recordings e.g. for cello and double bass.

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.



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


Prof. Recording Studio


Home Studio


Film/Foley/Voice Over


Concert Hall



Broadcast


Live Show (PA)

OUR STATE OF THE ART MICROPHONE: EXTREMELY VERSATILE AND SURPRISINGLY AFFORDABLE!

- Highly defined sound in 5 directional patterns
- Variable pad and low cut settings
- All-new capsule design
- Outstanding transient response

THE MODERN STUDIO WORKHORSE

The TLM 107 is a reference class microphone for vocals and instruments with breathtaking realism. Five polar patterns plus variable pad and low cut settings make the TLM 107 exceptionally flexible. And with a dynamic range of 131 dB the TLM 107 captures anything from a slight whisper to massive drums without unwanted noise or distortion.

21ST CENTURY MICROPHONE

The TLM 107 offers true high definition sound quality at an affordable price. Neumann developed this microphone for project and home studio users who prefer to capture an uncolored sound image, true to the original source, in order to retain all options for post processing and mixing. The TLM 107, in turn, offers all the flexibility required to make a high quality recording of any source in any situation.

Neumann decided to give the TLM 107 a modern look, although the large tapered head-grille does echo the iconic design of such Neumann classics as the M 49 tube microphone. The stylish navigation toggle on the back of the microphone is a joy to use as it controls all settings in one place: pad (0/–6/–12 dB), low cut (lin/40 Hz/100 Hz) and polar patterns (omni/wide cardioid/cardioid/hyper-cardioid/figure-8).

The newly developed dual diaphragm condenser capsule is specially designed for the TLM 107 to offer outstanding transient response and an extended, carefully balanced frequency response for all polar patterns. This means, you can adjust the directional pattern according to the recording situation without affecting the overall sound balance. Which is quite extraordinary for a large diaphragm microphone! And, needless to say, the TLM 107 offers true Neumann quality in any setting.

NEUMANN ENGINEERING

As a member of our TLM series, the TLM 107 operates with a transformerless circuit ensuring an open, transparent sound and a full, unrestricted bass transmission, even at highest levels. Two low cut settings are available to reduce rumble and compensate for the proximity effect in close miking situations. Even without engaging the two pad settings, the TLM 107 can handle enormous sound pressure levels of up to 141 dB without clipping (up to 153 dB with preattenuation).

The TLM 107 has a self-noise of only 10 dB-A, which is much lower than the ambient noise in a very quiet recording studio. In other words, the TLM 107 will add neither noise nor unwanted distortion to your recordings.

The TLM 107 is primarily designed for small studios but due to its no-compromise sound quality can also be used for high-end professional applications including broadcast and classical recordings. Not only is the TLM 107 an extremely versatile workhorse microphone for a wide range of instruments, such as acoustic and electric guitar, piano, upright bass, drums and percussion; it is also an outstanding vocal microphone.



Max SPL 153 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 GuitarFemaleVocalsBrassWoodwindMaleVocals DrumsBassPercussionStringsPiano You Name It MIC.



VARIANTS:











The TLM 170 R is available in nickel and matte black. We also offer stereo sets with a color-matching elastic suspension to protect the microphone against rumble and impact noise.

The TLM 170 R is provided with a tilting side bracket to attach the microphone to booms or stands. If necessary, it can be mounted on the other side of the microphone as well. The microphone stand is not part of the delivery scope. An adapter for all common microphone stand threads is included.

TLM 170 R



Prof. Recording Studio | Film/Foley/Voice Over | Concert Hall | Broadcast | Live Show (PA)

UNCOLORED, LINEAR, FLEXIBLE: THE PROFESSIONAL SOLUTION FOR ANY RECORDING SITUATION

- 5 directional patterns plus remote control option
- Very low self-noise and distortion
- Enormous dynamic range of 130 dB
- Extremely versatile

THE MODERN REFERENCE

The TLM 170 R is a truly universal microphone for even the most demanding recording situations. It combines technical excellence with the smoothness and flexibility of a large diaphragm capsule. The TLM 170 R offers an exceptionally even response in five directional patterns. The latter may be remote controlled via the optional N248 PSU.

A MILESTONE IN MODERN RECORDING

The TLM 170 R may be our most universal microphone. Over an enormous dynamic range it offers a remarkably linear frequency response, both on- and off-axis, in each of its five polar patterns. Thus, the TLM 170 R is able to capture the natural sound of any source, including its room ambience, without imparting a sonic imprint of its own. Additionally, the microphone's directionality may be remote controlled via the optional N248 PSU.

AHEAD OF ITS TIME

The TLM 170 R was conceived with high resolution in mind. As early as 1983 it achieved an enormous dynamic range of 130 dB. It was the first microphone to use Neumann's fet 100 technology with a transformerless output stage ensuring sonic transparency and powerful bass transmission, even at highest signal levels.

Its sonic transducer is no less impressive. The K 89 dual diaphragm capsule offers high linearity in every sense: smooth frequency response, fast transient response, and frequency independent polar patterns. Even the diffuse field response remains uncolored for all polar patterns, which is crucial in reverberant environments.

TRULY UNIVERSAL

The TLM 170 R is an excellent microphone for orchestral recordings and may be used both as a main microphone and as a spot mic. At the same time, the TLM 170 R is a superb microphone for vocals and speech, capturing the human voice in its natural beauty.

With a self-noise of only 14 dB, the TLM 170 R can be used for delicate sounds without adding unwanted hiss. At the same time, it can handle extremely loud sources of 154 dB SPL using the –10 dB preattenuation switch. A second switch activates a 100 Hz low cut. Five polar patterns may be selected via a rotary switch: omni, wide cardioid, cardioid, hypercardioid, and figure-8.

In the sixth position, patterns may be remote controlled from the optional N248 PSU. No special cables are required as pattern control works via Neumann's voltage sensing scheme: The phantom voltage is varied within the permissible ±4 V range of the P48 standard. The TLM 170 R sets its pattern according to the absolute voltage, while other microphones remain unaffected.

There may be no such thing as a perfect microphone, but the TLM 170 R comes fairly close: It combines the sonic precision and linearity of a small diaphragm microphone with the smoothness and flexible pattern control of a classic large diaphragm microphone.



Max SPL	154 dB
S/N Ratio	80 dB
Sensitivity	8 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.

UNCOLORED, LINEAR, FLEXIBLE.





The TLM 193 is available in matte 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 micro-phone stand threads is included.

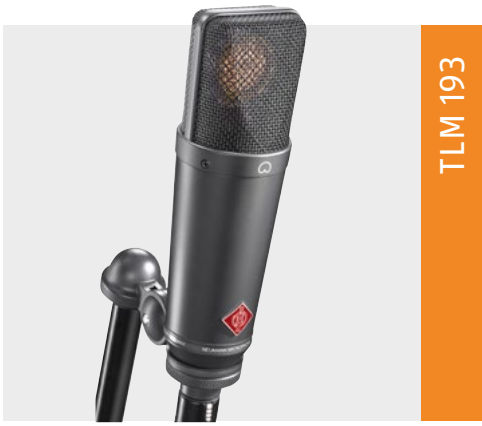
TLM 193



Prof. Recording Studio | Broadcast | Film/Foley/Voice Over | Concert Hall | Live Show (PA)

AN AFFORDABLE REFERENCE CLASS MICROPHONE, EXTREMELY EASY TO USE.

- Easy »plug-and-play« handling
- Cardioid pattern without off-axis coloration
- Very low self-noise and distortion
- Even frequency response, excellent transient behavior



TLM 193

Max SPL 140 dB

S/N Ratio 84 dB

Sensitivity 18 mV/Pa

SIMPLY BEAUTIFUL & BEAUTIFULLY SIMPLE

The TLM 193 is a reference class studio microphone for project studios and all applications that do not require selectable polar patterns. The TLM 193 is a switchless design with a fixed cardioid pattern and a remarkably even frequency response. This makes it extremely easy to use: Just aim it at the source and press record.

WHAT YOU HEAR IS WHAT YOU GET

The TLM 193 is a studio condenser microphone with an exceptionally uniform cardioid pattern for a very linear response both on- and off-axis. This makes the TLM 193 a very truthful and straightforward microphone which will capture the source and its room ambience without unwanted coloration. Thus, the TLM 193's sound image is very close to what you hear with your own ears.

PURE CARDIOID

Technically speaking, the TLM 193 is a streamlined, cardioid-only version of our acclaimed reference microphone TLM 170 R. It uses the same K 89 large diaphragm capsule, which is a modern, edge-terminated design uniting the benefits of large and small diaphragm microphones. The TLM 193 combines the superior linearity and fast transient response of a small diaphragm capsule with the smoothness and high sensitivity only a large diaphragm microphone offers.

As a member of our TLM series, the TLM 193 uses transformerless circuitry which minimizes transmission losses and ensures a vast dynamic range of 130 dB. This means, the TLM 193 is able to capture very soft and very loud sources without sonic degradation. In numbers: The microphone's self-noise of only 10 dB-A is way below the ambient noise in even a very quiet recording studio. And without requiring a pad switch, the TLM 193 is able to handle extreme sound pressure levels of up to 140 dB free from distortion artifacts.

SIMPLY BEAUTIFUL

Its sonic purity and technical excellence make the TLM 193 a very easy to use microphone for many applications. Just point it at the source to capture its natural sonic beauty. The TLM 193 is a superb microphone for vocals and speech, especially dubbing and voice-over work, where it will capture the authentic voice character without »added flavors«. Of course, the TLM 193 may also be used for a great variety of instruments such as acoustic and electric guitar, drums and percussion, piano, and much more.

The TLM 193 is mainly designed for home, project, and broadcast studios but is also a very useful and versatile addition for larger setups. Its linear, uncolored sound image both on- and off-axis makes the TLM 193 an excellent spot mic in orchestral recordings e.g. for low strings, woodwinds and brass an. Due to its slightly smaller size and dark color scheme, the TLM 193 is visually unobtrusive.

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.





The U 47 fet i is available in nickel in a wooden box with a certificate.

The microphone stand has to be ordered separately.

U 47 fet i



Prof. Recording Studio | Broadcast | Film/Foley/Voice Over | Concert Hall | Live Show (PA)

BACK BY POPULAR DEMAND!
THE U 47 FET I SHAPED THE SMOOTH AND RICH SOUND OF THE 70S.

- Exact reproduction of Neumann's 1970s classic
- Same large diaphragm capsule as the legendary U 47
- FET electronics with large output transformer
- Extremely high SPL capability



U 47 fet i

Max SPL 147 dB

S/N Ratio 76 dB

Sensitivity 8 mV/Pa

Pad

A LEGEND REBORN

Introduced in 1972 as a successor to the legendary U 47 tube microphone, the U 47 fet became a Neumann classic in its own right. Its smooth yet defined character shaped the sound of the 70s. After a long hiatus, the U 47 fet is finally available again, meticulously reproduced from the same components. A true classic, yet far from outdated.

THE SOUND OF THE SEVENTIES

»Smooth« is the word that best describes the sonic ideal of the seventies. The then new U 47 fet was very much part of that sound. Introduced in 1972, it soon became a studio favorite combining the refined sound balance of its tube predecessor with a new clarity and greater ease of use. Toward the mid-80s, as records became increasingly more strident, the smooth U 47 fet fell out of favor as a vocal microphone and was discontinued. Yet over the years top engineers discovered new applications for the U 47 fet in front of guitar cabinets and kick drums. Eventually, famous vocalists from boy group pop to heavy metal reestablished the U 47 fet as a versatile vocal microphone. So now, by popular demand, it's back in production.

FAR FROM OUTDATED

The U 47 fet uses the same K 47 large diaphragm condenser capsule and the same head-grille design as its tube operated predecessor, the legendary U 47, which revolutionized the recording and broadcast industries from 1949 to 1960. For sonic continuity, the U 47 fet also uses a similarly oversized output transformer. Otherwise, its transistorized head amplifier is an amazingly advanced design and a testament to Neumann's state of the art engineering. This »vintage« microphone has a dynamic range of 119 dB!

The U 47 fet can handle extreme SPLs of up to 137 dB, and even 147 dB with the –10 dB pad switch engaged. This, along with its smooth top end and lush midrange, makes the U 47 fet an excellent microphone for bright and loud instruments such as brass and electric guitar. Due to its exceptionally clear and uncluttered low end, it is a great choice for upright bass and bass cabinets. Numerous top engineers consider U 47 fet the ultimate microphone to place in front of the kick drum. At the same time it is an excellent vocal mic for crooners and screamers alike, due to its beautifully balanced response with just a slight, unobtrusive boost in the upper mids for added presence in the mix.

The U 47 fet comes with a unique one-sided swivel mount, which makes it easy to position. Pad and low cut switches are accessible on the rear of the microphone. An additional switch next to the XLR socket allows for attenuating the output signal by 6 dB, which is a handy feature in conjunction with low-headroom vintage preamplifiers.

A LEGEND REBORN.





The U 67 Set is available in nickel with an elastic suspension and cable in a vintage case. Also the power supply NU 67 V incl. power cable is part of the delivery scope.

U 67 SET



Prof. Recording Studio



Film/Foley/Voice Over

THE TUBE MICROPHONE THAT DEFINED THE SOUND OF THE 1960S. THE ORIGINAL IS BACK!

- Classic tube circuit, transformer balanced
- Balanced sound in three polar patterns
- Meticulously reproduced to original specifications
- Vintage case, handmade in Germany



Max SPL 124 dB

S/N Ratio 77 dB

Sensitivity 24 mV/Pa



THE ORIGINAL – OFTEN IMITATED, NEVER DUPLICATED

Introduced in 1960, the U 67 was the quintessential studio workhorse throughout the formative years of modern music. Today, more than ever, its inimitably smooth sound continues to be in high demand. Now, for the first time in decades, Neumann's legendary tube microphone is back in production, built to the original specifications.

RETURN OF A LEGEND

Introduced as the successor to the eminent Neumann U 47, a lesser microphone would have failed. But the U 67 was quickly adopted as the new studio standard, offering many advantages over its predecessor. With three selectable polar patterns and advanced tube circuitry, including low cut and pad switches, the Neumann U 67 was well-equipped for virtually any recording task. It still is: To this day, many top level engineers would choose the U 67 as their »desert island« microphone for its extraordinary versatility and unmatched sound quality.

NEUMANN ENGINEERING AT ITS BEST

The U 67 was the first microphone equipped with the famous K 67 capsule, which has since become associated with »the Neumann sound« and continues to be used in its successor, the U 87 A. No less important is the U 67's masterful tube circuit featuring a clever pre-emphasis/de-emphasis scheme to minimize tube hiss. The U 67 was also the first microphone to address modern recording techniques such as close miking. Its switchable low cut filter compensates for the proximity effect occurring at short recording distances. Using its preattenuation, the U 67 can handle high sound pressure levels of up to 124 dB without distortion (and much more if you don't mind a bit of »tube grit«).

As timeless as its sound and technical design is its outer appearance. The U 67's cone-shaped body and the tapered headgrille have since become iconic for the Neumann brand; the same elegant design would grace its solid state successor, the U 87, for the next 50+ years.

APPLICATIONS

The U 67 is a universal studio microphone suitable for all applications. Its smooth top-end with a subtle tube shimmer makes the U 67 an outstanding vocal microphone. Due to its essentially linear response in three polar patterns – omni, cardioid, and figure-8 – the U 67 is also a very versatile microphone for all kinds of instruments such as strings, woodwinds, brass, piano, drums, acoustic and electric guitar, bass guitar and upright bass.

HISTORY REPEATING

Sonically, the current reissue is identical to the U 67 made from 1960–1971. It uses the same capsule and electronic design. Key parts, such as the BV 12 output transformer, are meticulously reproduced according to original documentation. EF86 tubes are carefully selected for optimal characteristics and lowest noise in a dedicated measurement facility. The power supply was redesigned to meet today's strict safety requirements and to accommodate the slightly higher filament current of newer premium grade tubes. The new power supply NU 67 V is fully compatible with older U 67 microphones.

THE ORIGINAL IS BACK.



VARIANTS:











The U 87 Ai is available in **nickel and matte black**. We also offer studio 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.

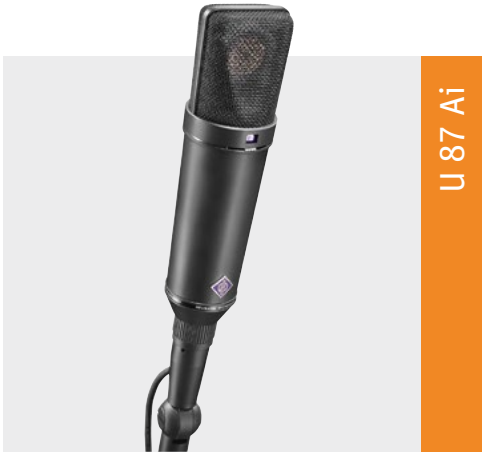
U 87 Ai



Prof. Recording Studio | Film/Foley/Voice Over | Concert Hall | Broadcast | Live Show (PA)

THE ULTIMATE STUDIO STANDARD ALL OVER THE WORLD. FOR 50 YEARS!

- The most widely used studio microphone for 50 years
- Balanced frequency response in three polar patterns
- Very low self-noise
- Classic sound



U 87 Ai

Max SPL 127 dB

S/N Ratio 82 dB

Sensitivity 28 mV/Pa



THE GOLD STANDARD

The Neumann U 87 Ai is probably the best-known and most frequently used studio microphone the world over. Its smooth and refined sound is as iconic as its elegant exterior design. The U 87 Ai is the standard microphone for speech and vocals. Three polar patterns plus pad and low cut options make it adaptable to a wide range of applications.

UBIQUITOUS YET UNIQUE

The Neumann U 87 Ai is a true legend. Introduced in 1967, it has shaped the sound of countless hit records for the past 50 years. And when those hits were announced on the radio, many a DJ sat before a U 87 Ai. The legend continues: To this day, no professional recording studio is complete without a Neumann U 87 Ai.

The U 87 Ai is the epitome of a large diaphragm condenser microphone. Its tapered body and iconic headgrille design have become part of the collective consciousness: This is what a studio microphone looks like. The same is true of its sound: The U 87 Ai represents studio quality; it has become the gold standard by which other microphones are measured.

What sets the U 87 Ai apart is its unique combination of linearity and character. Although its on-axis frequency response is remarkably flat, it does exert certain charisma. It just sounds right! This makes the U 87 Ai both versatile and instantly recognizable.

CLASSIC NEUMANN ENGINEERING

Technically speaking, the U 87 Ai is a traditional design whose timeless formula has remained unchanged for decades. The U 87 Ai uses the same dual diaphragm condenser capsule design as its predecessor, the no less legendary U 67 of the early 1960s. Its head amplifier, too, is based on the same design principles as its tube driven predecessor, but the U 87 Ai realizes them by means of a unique FET circuit with a minimal signal path and a transformer balanced output, ensuring maximum signal integrity and high common mode rejection.

The result is a studio microphone of unmatched clarity. Its natural sound and unique midrange presence make the U 87 Ai the ultimate vocal microphone, praised by singers and engineers alike, as well the prime choice for speech applications, such as voice over, dubbing, and audio books. Due to its balanced response in each of its three directional patterns, the U 87 Ai is also a versatile microphone for anything from acoustic guitar to drums overheads. Due to its solid bass response and excellent midrange detail, it is often seen in front of bass and guitar cabinets. For classical recordings, the U 87 Ai is frequently used as a spot mic for soloists, e.g. cello. A stereo pair of U 87 Ais is the preferred choice of many engineers for recording piano in virtually any genre from pop and jazz to classical music.

THE ULTIMATE STUDIO STANDARD ALL OVER THE WORLD.



VARIANTS:





The U 89 i is available in nickel and matte black in a wooden box.

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

U 89 i


Prof. Recording Studio


Film/Foley/Voice Over


Concert Hall

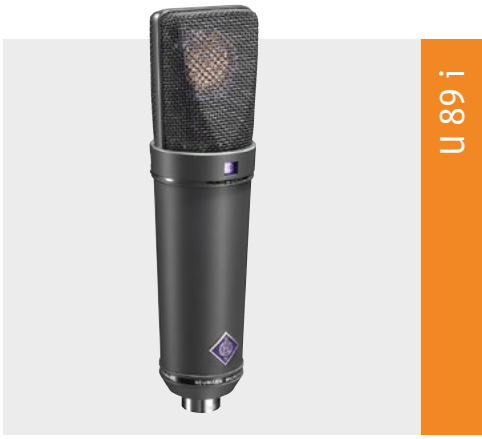


Broadcast


Live Show (PA)

CLASSIC SOUND WITH ENHANCED CLARITY AND LINEARITY PLUS MODERN FLEXIBILITY.

- Even frequency response in 5 directional patterns
- Very low distortion
- High SPL capabilities
- Transformer balanced circuit



Max SPL 140 dB

S/N Ratio 77 dB

Sensitivity 8 mV/Pa



THE PURSUIT OF PERFECTION

The U 89 i is a universal studio microphone combining classic transformer coupled circuit topology with a state of the art Neumann capsule. Its linear yet smooth response has made it a prime choice for voice over and speech, but thanks to five selectable polar patterns, low noise and distortion, it covers almost any recoding situation in any genre.

A MODERN CLASSIC

The U 89 i combines advanced capsule technology with classic transformer coupled electronics. The result is a very versatile large diaphragm condenser microphone for all studio applications. Its features include five selectable polar patterns and a two-stage low cut as well as a switchable 6 dB preattenuation for extreme sound pressure levels of up to 140 dB without unwanted distortion.

BUILDING THE PERFECT BEAST

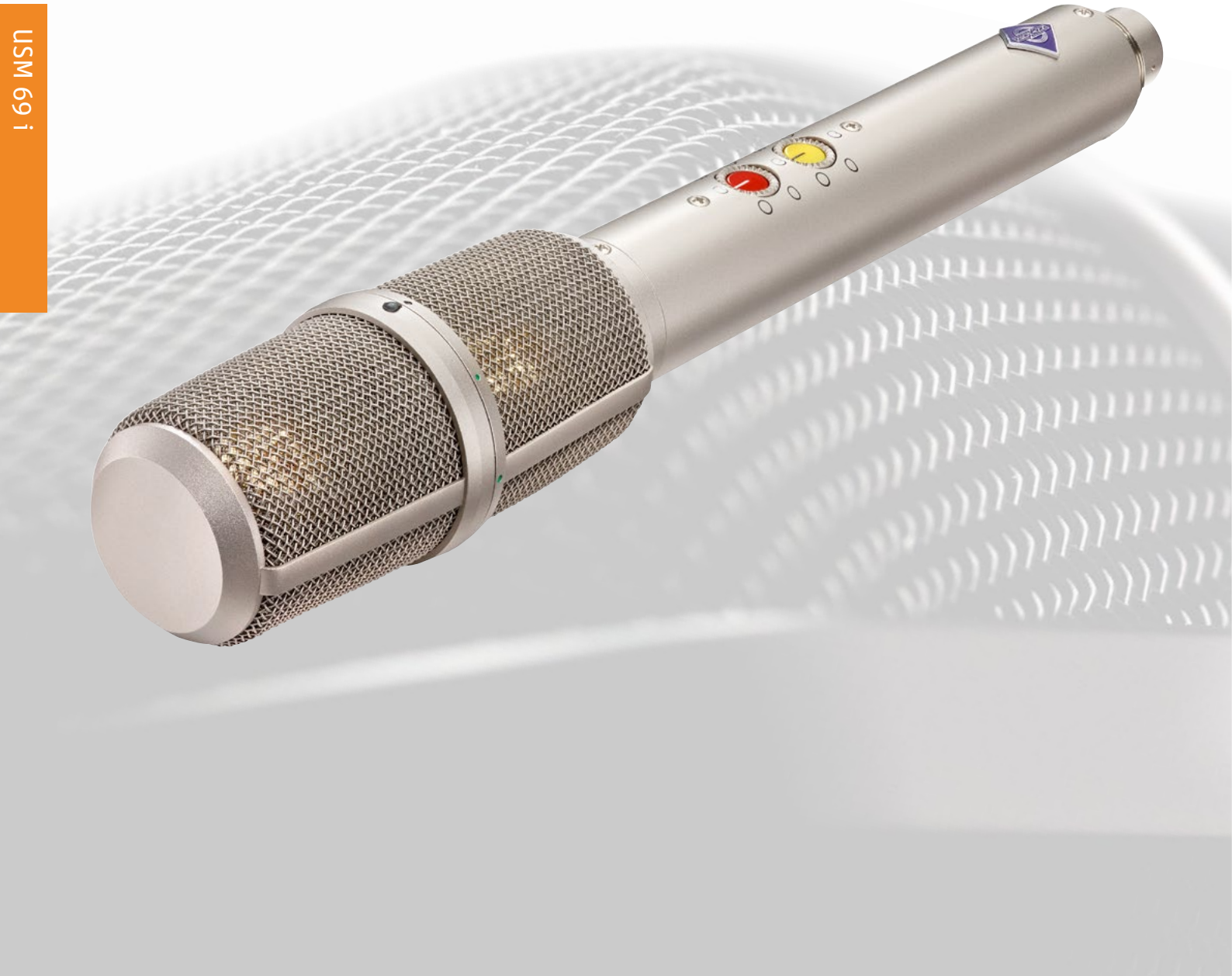
The U 89 i is similar in appearance to the legendary Neumann U 87 but smaller in size and lighter weight. This is no coincidence: Introduced in 1980, the U 89 i was conceived with the goal to improve upon the classic Neumann U 87. While the latter has remained the world's most beloved large diaphragm condenser microphone, the U 89 i is indeed technically superior in many respects. Not only can the U 89 i handle much higher sound pressure levels, it also has a more flexible low cut filter (lin, 80 Hz, 160 Hz) to suppress rumble and compensate for the proximity effect. And in addition to the three main polar patterns, omni, cardioid, and figure-8, the U 89 i offers two intermediate positions, wide cardioid and hypercardioid.

Its K 89 dual diaphragm condenser capsule is an advanced design with an extended, very smooth frequency response in all polar patterns. Its diffuse-field response is very even, too, which is crucial for natural sounding recordings in reverberant environments. In other words, the U 89 i's sound balance remains intact as you switch between polar patterns, and any off-axis sound, including spill from other instruments, is picked up uncolored. This is quite extraordinary for a large diaphragm microphone.

APPLICATIONS

The U 89 i offers the best of both worlds: It combines the sonic precision and linearity of a state-of-the-art small diaphragm condenser microphone with the smoothness and flexibility of a large diaphragm microphone. This makes the U 89 i a truly universal studio microphone. The U 89 i is an excellent vocal microphone, especially for trained professionals who prefer to have their voice captured in its natural beauty. For the same reasons, the U 89 i is a sought-after microphone for voice over and film dubbing. U 89 i's unique combination of flexibility and superior off-axis behavior makes it an excellent choice for orchestral recordings, where it can be used as a main microphone or as a spot microphone for soloists and individual sections.

THE PURSUIT OF PERFECTION.



VARIANTS:





The USM 69 i is available in nickel and matte black in a wooden box.

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

USM 69 i



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USM 69 i

ONE-POINT STEREO MICROPHONE FOR XY- AND MS-TECHNIQUES

- Two independent systems with 5 polar patterns each
- Same large diaphragm capsules as U 87 Ai
- Upper system rotates up to 270° for XY and MS techniques
- Transformer balanced circuit with very low self-noise

Max SPL 132 dB

S/N Ratio 81 dB

Sensitivity 13 mV/Pa



STEREO RECORDING MADE EASY

The USM 69 i is a one-point stereo microphone for all coincident stereo techniques such as XY, MS, and Blumlein. Each of the two large diaphragm capsule systems has its own pattern selector with 5 positions; the upper system can be rotated over a range of 270°. The USM 69 i can also be used in mono with two directional characteristics simultaneously.

ONE POINT STEREO MICROPHONE

Stereo recording with two separate microphones can be cumbersome. Especially with coincident stereo setups, where the two capsules must be placed very close to each other at a defined angle to ensure precise imaging. The Neumann USM 69 i one point stereo microphone makes such coincident stereo recording techniques very easy.

TWO IN ONE

The USM 69 i has two separate dual diaphragm condenser capsules, mounted vertically, which may be rotated against each other over an angle of 270°. The polar pattern of each capsule can be selected individually using two built-in rotary switches. Each capsule has its own head amplifier feeding separate pins of the XLR 5 output connector. The USM 69 i, thus, is two independent microphones in one convenient package. As it requires only one microphone stand, the USM 69 i is very easy to re-position for optimal results.

With five polar patterns available for each capsule – omni, wide cardioid, cardioid, hypercardioid, and figure-8 – the USM 69 i allows for MS and XY stereo techniques in all variations, including Blumlein. Thanks to its low self-noise of 13 dB-A and its high SPL capability of 132 dB, the USM 69 i may be placed freely for best sound and imaging, with no worries about excess noise or distortion. An active subsonic filter protects the output transformers from overload due to structure borne noise.

APPLICATIONS

The USM 69 i is an excellent stereo microphone for any musical applications such as vocal and instrumental ensembles, drums overheads, large instruments such as grand piano and harp, as well as solo instruments when stereo width and spatial movement is desired to enhance the listening experience. The USM 69 i is also a superb microphone for radio drama, and audio book productions with a sound similar to the acclaimed standard for spoken word, the Neumann U 87 Ai, but adding a stereo perspective.

ADDITIONAL USES

Apart from stereo applications, the USM 69 i may also be used to record a mono source with two different polar patterns simultaneously. Since both microphones inside the USM 69 i work completely independently, it can serve as its own backup microphone in high reliability situations. If one side fails or is inadvertently disconnected, the other side remains unaffected. Even in the rare event that DC converter for the capsule bias fails, the USM 69 i remains operational; both systems will automatically select the cardioid pattern and continue to work with just a slightly reduced sensitivity.

STEREO RECORDING MADE EASY.





The M 147 Tube is available in nickel with a swivel mount, cable and dust cover in an aluminium case. Also the power supply incl. power cable is part of the delivery scope.

M 147 TUBE


Prof. Recording Studio


Film/Foley/Voice Over


Concert Hall

VINTAGE TUBE MICROPHONE WITH THE CLASSIC NEUMANN SOUND

- Cardioid pattern
- Same capsule design as the legendary U 47 and M 49 microphones
- Tube electronics with very low self-noise



Max SPL 134 dB

S/N Ratio 82 dB

Sensitivity 20 mV/Pa



A CLASSIC TUBE MICROPHONE FOR THE 21ST CENTURY

The M 147 Tube brings back the classic sound of Neumann's famous tube microphones of the 1950s. The M 147 tube is a cardioid microphone using the same large diaphragm capsule as the legendary U 47 but combines it with an innovative tube circuit for lowest noise. Its transformerless output stage ensures superb performance at an attractive price.

VINTAGE SOUND WITH MODERN MUSCLE

With digital recording and ultra-clean processing, many engineers find themselves looking for tube microphones to reinstate a more »analogue« sound character. The Neumann M 147 is a tube microphone specially designed for 21st century recording chains. Its acoustic design is inspired by the legendary U 47, which revolutionized studio recording in the 1950s with its superior sound quality and is still used daily in top studios around the world. The head amplifier of the M 147 combines classic tube circuitry with an advanced solid state output stage for vintage sound with a modern punch.

The headgrille of the M 147 is more than a visual statement: It is a slightly more compact version of the iconic U 47 capsule head, partly responsible for its legendary sound. Even more importantly, it shares the same sound transducer, the classic K 47 large diaphragm condenser capsule, known for its exceptional combination of warmth and presence. The capsule signal is amplified by a classic tube circuit using a specially selected subminiature triode. While vintage microphones relied on large and expensive audio transformers for the final impedance conversion, the M 147 uses a state-of-the-art transformerless solid state output stage, which allows for long cable runs up to 300 m without transmission losses and ensures a very direct sound with unrestricted bass response.

APPLICATIONS

The M 147's unique sound character with unsurpassed presence and a distinctive midrange focus is ideally suited for vocals, both male and female, as well as speech applications such as voice-over and film dubbing. The M 147 is also an excellent spot mic for any solo instruments. Unlike many other tube microphones, the M 147 can be used for quiet sources, due to its exceptionally low self-noise of only 12 dB-A. Although its max SPL figure of 114 dB appears low, the M 147 works well with louder sources, too, as distortion rises very slowly to 5% THD for 134 dB SPL. This behavior is intentional: The M 147 creates a sense of elevated loudness by means soft saturation – just like in the days of analog recording.

A CLASSIC TUBE MICROPHONE FOR THE 21ST CENTURY.





The M 149 Tube is available in nickel with an elastic suspension, cable and dust cover in an aluminium case. Also the power supply incl. power cable is part of the delivery scope.

M 149 TUBE



Prof. Recording Studio



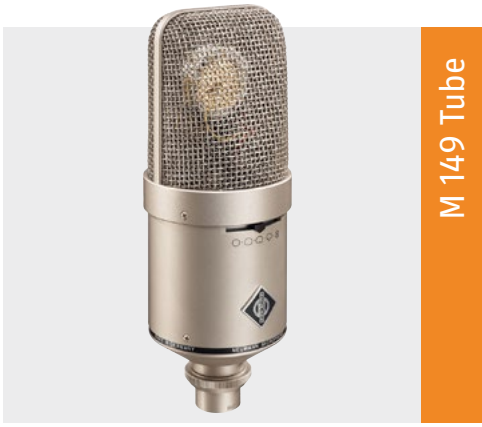
Film/Foley/Voice Over



Concert Hall

NEUMANN'S HIGH-END TUBE MICROPHONE: CLASSIC SOUND FOR ALL APPLICATIONS.

- 9 directional characteristics
- 7-position low cut
- Same capsule as the legendary U 47 and M 49 microphones
- Tube electronics with very low self-noise



M 149 Tube

Max SPL 136 dB

S/N Ratio 81 dB

Sensitivity 47 mV/Pa



STATE OF THE ART TUBE MICROPHONE

The M 149 Tube is a modern version of Neumann's famous M 49 microphone. Like its predecessor, it uses the classic K 47/49 large diaphragm capsule in an acoustically open headgrille. The M 149 is a universal studio microphone with 9 selectable polar patterns. Its innovative transformerless tube circuit ensures optimal sound with lowest self-noise.

CLASSIC NEUMANN SOUND WITH 21ST CENTURY PERFORMANCE

The M 149 is a universal studio microphone with tube electronics in the tradition of the legendary M 49, the large diaphragm condenser microphone that raised the standard of audio recording in the 1950s and has shaped the sound of countless jazz and pop albums ever since. The M 149 continues in this tradition, augmenting the timeless fidelity of its predecessor with updated technology and improved performance specs.

The M 149 uses the same sound transducer as its famous predecessor, the classic K 47/49 large diaphragm capsule, renowned for its supreme balance and unmatched presence. This delicate dual diaphragm capsule is housed in a large, acoustically open headgrille, which minimizes internal reflections. The capsule signal is then amplified by a sub-miniature triode tube, specially selected for lowest noise and optimal transmission characteristics. The final stage is a high-precision, ultra-low distortion transformerless output stage, which preserves the full dynamics of the preceding tube circuit and is optimized for 21st century signal chains. The M 149 offers higher sensitivity and much lower noise than vintage tube microphones. And thanks its current sensing technology, which ensures optimal operating conditions for the tube, and its low output impedance, the M 149 can drive long cable runs of up to 300 m without transmission losses. It was this innovative combination of classic tube technology with state of the art Neumann engineering which earned the M 149 a prestigious TEC Award in 1997.

TRULY UNIVERSAL

The M 149 offers nine directional characteristics – omni, wide cardioid, cardioid, hyper-cardioid, figure-8, plus four intermediate positions – as well as a 7-position low cut (20 to 160 Hz in half-octave steps). This flexibility along with an exceptionally low self-noise figure of only 13 dB-A (cardioid mode) makes the M 149 a truly universal studio microphone for all applications. Not only is the M 149 a superb microphone for vocal-ists in any genre; unlike many other modern tube microphones, it is also an amazingly versatile microphone for a wide range of instruments, such as piano, acoustic and electric guitar, upright bass, percussion, drums overheads, as well as solo strings, brass and woodwind instruments. The M 149 is a premium microphone which will satisfy even the most demanding users.

STATE OF THE ART TUBE MICROPHONE.





The M 150 Tube is available in nickel with an elastic suspension and cable in an aluminium case. Also the power supply is part of the delivery scope.

M 150 TUBE


Prof. Recording Studio


Concert Hall


Film/Foley/Voice Over

A UNIQUE TUBE MICROPHONE, SPECIALLY DESIGNED FOR SUPERIOR ORCHESTRAL RECORDINGS.

- Recreates the sound of the legendary Neumann M 50
- Titanium capsule with unique directional characteristic
- Perfect for orchestral recording



Max SPL 134 dB

S/N Ratio 79 dB

Sensitivity 20 mV/Pa



A LEGEND PERFECTED

The M 150 Tube is a unique small diaphragm condenser microphone for orchestral recordings, based on the legendary Neumann M 50. The M 150 uses a titanium capsule flush mounted in a small sphere to create an omni pattern which becomes directional at higher frequencies. An innovative transformerless tube circuit ensures a vivid sound with low noise.

TRULY UNIQUE – UNIQUELY TRUE

The M 150 is a unique tube microphone in the tradition of the legendary Neumann M 50 of the 1950s, often quoted as the ultimate microphone for orchestral recording. The M 150 offers the same phenomenal transient response and unique directional characteristic as its ancestor, updated with 21st century technology and improved performance.

CONSTRUCTION

Like its predecessor, the M 150 uses a 12 mm small diaphragm capsule, flush mounted in a 40 mm sphere. The capsule itself is a pressure transducer, but the sphere modifies its omnidirectional pattern to become gradually more directional at higher frequencies. The M 150's condenser transducer is extraordinary in other respects, too: Its ultra-thin diaphragm is made of titanium, a light yet rigid metal, and spaced only 10 microns from the backplate, also made of titanium. The result is a sound transducer with unparalleled transient response. This delicate capsule is protected by an acoustically open head-grille – shaped just like that of the venerable M 50.

The capsule signal is amplified by a tube circuit using a subminiature triode, specially selected for optimal transmission characteristics and lowest self-noise of only 15 dB-A. Unlike its ancestor developed in the 1950s, however, the M 150 does not use an output transformer which might color the sound. Instead, the M 150 relies on an ultra-transparent transformerless output stage ensuring a clear low end, even at highest levels, and a wide dynamic range of 119 dB. Moreover, this state of the art output stage allows for long cable runs of up to 300 m without transmission losses.

A –10 dB switch allows to attenuate the microphone signal at the output for use with low headroom preamps. Another switch activates a 40 Hz rumble filter; in the LIN position, the low cut filter is not entirely deactivated but shifted to 16 Hz in order to protect the console input from sub-audio noise as the capsule's low frequency response is virtually unlimited.

APPLICATIONS

The M 150 is primarily designed to bring unprecedented detail and realism to orchestral recordings, e.g. of classical pieces and film scores. Due to its unique »directional omni« characteristic, its outstanding transient response, and a gradually rising sensitivity above 1 kHz, the Neumann M 150 is the perfect microphone for DECCA Tree techniques, including extended surround setups.

DESIGNED FOR SUPERIOR ORCHESTRAL RECORDINGS.



VARIANTS:





The KMS microphones are available in nickel 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 Show (PA) Broadcast Home Studio Film/Foley/ Voice Over

STUDIO GRADE STAGE MICROPHONE FOR VOCALISTS.

- Cardioid/supercardioid pattern with excellent feedback rejection
- Studio quality condenser capsule
- Transparent sound with a gentle treble lift
- Excellent pop protection



KMS Series

NEUMANN SOUND ON STAGE

The KMS 104, KMS 104 plus and KMS 105 are studio grade vocal microphones for stage use. Their precision manufactured condenser capsules offer true Neumann sound quality, combined with all the virtues of a rugged stage microphone: excellent pop protection, low handling noise, enormous SPL capability, and high feedback resistance.

STUDIO QUALITY FOR STAGE VOCALS

The Neumann KMS series brings studio sound quality to the stage. Unlike usual stage microphones, which use dynamic capsules, the KMS series is equipped with true condenser microphone capsules offering the superior clarity that made Neumann studio microphones famous all over the world. The KMS microphones have a much smoother frequency response than dynamic microphones and an airy top-end. Compared to dynamic microphones, the Neumann KMS series has a vastly superior transient response resulting in a more immediate and more emotional vocal sound. In practical terms: effortless intelligibility, without the usual EQ boosts – which also improves feedback resistance.

At the same time, the KMS series possesses the ruggedness required of a stage mic, thus refuting the myth that condenser microphones must be »fragile«. The KMS microphones can stand enormous sound pressure levels of up to 150 dB without clipping and are designed for high gain before feedback. The KMS series is optimized for close miking; a fixed low cut filter compensates for the proximity effect and ensures clear bass, even if the singer's lips touch the microphone. The headgrille is made of hardened steel and features a highly effective internal pop screen. Thanks to careful Neumann engineering, these acoustic filters do not cause any sibilance problems. The head amplifier is protected by a thick-walled housing. Its transformerless output minimizes electromagnetic interference, such as hum. Because of its low output impedance of only 50 ohms, the KMS 104 can drive very long cable runs of up to 300 m (1000 ft) without transmission losses.

The directional characteristic of the KMS 104 and 104 plus is cardioid with optimal rejection of sound from the rear, the KMS 105 has a supercardioid pattern with greater directivity and higher rejection of sound from the sides. Compared to the KMS 104, the KMS 104 plus gives added emphasis to the lower register (100-150 Hz) , thus lending more »weight« and »warmth« to voices which might sound too »light« with the KMS 104. The plus version is particularly popular with female singers.

APPLICATIONS

The KMS Series is suited for stage vocals and speech but can be used for other on-stage applications as well, due to its high SPL capability and wide dynamic range. Examples include percussion, saxophone, trumpet, trombone, harmonica, acoustic guitar, and guitar cabinets. The KK 105 S is suited for in-ear monitoring as well as conventional monitoring systems. Thanks to its superior sound quality, the KMS series is also an excellent choice for home recording and broadcast applications.

KMS 104 / 104 plus / 105:

Max SPL	150 dB
S/N Ratio	76 dB
Sensitivity	4.5 mV/Pa

KMS 104 KMS 104 plus KMS 105



NEUMANN SOUND ON STAGE.



VARIANTS:



The KK 104 S, KK 105 S and the KK 105 HD capsule heads are available in nickel and black. They are packaged in a smart road-ready cushioned nylon bag.

The Sennheiser Wireless System has to be ordered separately.

KK 104/105 S



Live Show (PA)

CARDIOID/SUPERCARDIOID CONDENSER CAPSULE HEADS FOR SENNHEISER 5000/5200 WIRELESS SYSTEMS.

- Cardioid/supercardioid pattern with high feedback resistance
- Studio grade Neumann condenser capsule
- For Sennheiser SKM 5000 and 5200 handheld transmitters



KK 104/105 S

NEUMANN SOUND ON STAGE. WIRELESS.

The KK 104/105 S are premium quality capsule heads for Sennheiser SKM 5000/5200 handheld transmitters. The precision manufactured condenser capsules offer true Neumann sound, combined with the freedom of wireless operation and all the virtues of a rugged stage microphone: excellent pop protection, enormous SPL capability, and high feedback resistance.

STUDIO QUALITY FOR WIRELESS SYSTEMS

The KK 104/105 S capsule heads bring studio sound quality to the stage for the most demanding live applications. The KK 104/105 S combine Neumann's famous sense of perfection with Sennheiser's long standing expertise in live performance engineering.

The KK 104/105 S capsule heads are based on Neumann's highly successful, award-winning KMS series of wired stage microphones. While most stage microphones use dynamic capsules, the KK 104/105 S are equipped with true condenser capsules offering the superior clarity that made Neumann studio microphones famous all over the world. At the same time, the KK 104/105 S possess the ruggedness required for stage use, thus refuting the myth that condenser microphones must be »fragile«. The KK 104/105 S can stand enormous sound pressure levels of up to 148/150 dB without clipping, and their tight, frequency-independent pattern ensures high gain before feedback. The KK 104/105 S have a much smoother frequency response than dynamic microphones and an airy top-end. Compared to dynamic microphones, the Neumann KK 104/105 S have a vastly superior transient response resulting in a more immediate, more emotional vocal sound. In practical terms: effortless intelligibility, without the usual EQ boosts – which further improves feedback resistance.

The KK 104/105 S are optimized for close miking; a fixed low cut filter compensates for the proximity effect and ensures clear bass, even if the singer's lips touch the microphone. The headgrille is made of hardened steel and features a highly effective internal pop screen. The »heavy duty« variant KK 105 HD uses an integrated foam screen for even greater pop protection. Thanks to careful Neumann engineering, these acoustic filters do not cause any sibilance problems.

APPLICATIONS

Neumann capsule heads in combination with Sennheiser wireless systems have proven their outstanding sound quality and reliability on some of the largest stages of the world, including international TV events, such as the Eurovision Song Contest.

The KK 104/105 S are designed for vocals and speech on stage and in other feedback-prone environments. They are suited for in-ear monitoring as well as conventional monitoring systems.

KK 104 S

Max SPL	148 dB
S/N Ratio	63 dB
Sensitivity	1.7 mV/Pa

KK 105 S / KK 105 HD

Max SPL	150 dB
S/N Ratio	61 dB
Sensitivity	1.3 mV/Pa

KK 104 S KK 105 S KK 105 HD



NEUMANN SOUND ON STAGE. WIRELESS.



VARIANTS:



The KK 204 /205 capsule heads are available in nickel and black. They are packaged in a smart road-ready cushioned nylon bag.

The Sennheiser Wireless System has to be ordered separately.

KK 204/205



Live Show (PA)

CARDIOID/SUPERCARDIOID CONDENSER CAPSULE HEADS FOR SENNHEISER 2000/6000/9000 AND EW G4 WIRELESS SYSTEMS.

- Cardioid/supercardioid pattern with high feedback resistance
- Studio grade Neumann condenser capsules
- For Sennheiser SKM 2000/6000/9000 and SKM 300/500 G4 handheld transmitters



KK 204/205

Max SPL 150 dB

S/N Ratio 70 dB

Sensitivity 2.8 mV/Pa

KK 204 KK 205



NEUMANN SOUND ON STAGE. WIRELESS.

The KK 204/205 are premium quality capsule heads for Sennheiser SKM 2000/6000/9000 and SKM 300/500 G4 handheld transmitters. The precision manufactured condenser capsules offers true Neumann sound, combined with the freedom of wireless operation and all the virtues of a rugged stage microphone: excellent pop protection, enormous SPL capability, and high feedback resistance.

STUDIO QUALITY FOR WIRELESS SYSTEMS

The KK 204/205 capsule heads bring studio sound quality to the stage for the most demanding live applications. Simply put, the KK 204/205 are the best capsule heads for the best wireless system, combining Neumann's famous sense of perfection with Sennheiser's long standing expertise in live performance engineering.

The KK 204/205 capsule heads are based on Neumann's highly successful, award-winning KMS series of wired stage microphones. While most stage microphones use dynamic capsules, the KK 204/205 are equipped with true condenser capsules offering the superior clarity that made Neumann studio microphones famous all over the world. At the same time, the KK 204/205 possess the ruggedness required for stage use, thus refuting the myth that condenser microphones must be »fragile«. The KK 204/205 can stand enormous sound pressure levels of up to 150 dB without clipping, and their tight, frequency-independent pattern ensures high gain before feedback. The KK 204/205 have a much smoother frequency response than dynamic microphones and an airy top-end. Compared to dynamic microphones, the Neumann KK 204/205 have a vastly superior transient response resulting in a more immediate, more emotional vocal sound. In practical terms: effortless intelligibility, without the usual EQ boosts – which further improves feedback resistance.

The KK 204/205 are optimized for close miking; a fixed low cut filter compensates for the proximity effect and ensures clear bass, even if the singer's lips touch the microphone. The headgrille is made of hardened steel and features a highly effective internal pop screen which also keeps moisture away from the capsule. Thanks to careful Neumann engineering, these acoustic filters do not cause any sibilance problems.

APPLICATIONS

Neumann capsule heads in combination with Sennheiser wireless systems have proven their outstanding sound quality and reliability on some of the largest stages of the world, including international TV events, such as the Eurovision Song Contest.

The KK 204/205 are designed for vocals and speech on stage and in other feedback-prone environments. They are suited for in-ear monitoring as well as conventional monitoring systems.

STUDIO QUALITY FOR WIRELESS SYSTEMS.



VARIANTS:





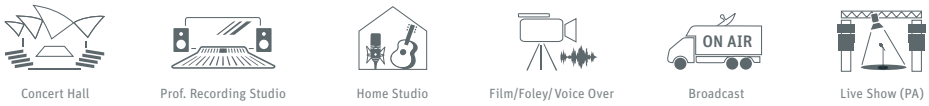




All Series 180 microphones are available with either matte black or nickel finish with a swivel mount and a foam windscreen. We also offer the miniature microphones as a stereo set in a wooden box.

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

SERIES 180



Concert Hall | Prof. Recording Studio | Home Studio | Film/Foley/ Voice Over | Broadcast | Live Show (PA)

STATE-OF-THE-ART SMALL DIAPHRAGM CONDENSER MICROPHONES.

- Uniform pickup patterns without off-axis coloration
- Very low self-noise
- High SPL capability
- Transformerless electronics



Series 180

UNCOLORED, TRANSPARENT, VERSATILE

The KM 183 (omni), KM 184 (cardioid), and KM 185 (hypercardioid) are state-of-the-art small diaphragm condenser microphones with uniform, frequency-independent polar patterns. A very natural, transparent sound with very low self-noise and high SPL capability has made the Series 180 a worldwide stage and studio standard for many applications ranging from classical piano to heavy metal drums.

FAITHFUL

While many microphones, these days, are designed to add some sonic imprint of their own, there are many applications that require a faithful reproduction of the original acoustic event, without adding or removing anything. That's where the Neumann Series 180 comes in.

The Neumann Series 180 comprises three microphones with different pickup patterns: KM 183 (omni), KM 184 (cardioid), and KM 185 (hypercardioid), thus covering the majority of stage and studio applications. Because the Series 180 microphones are non-modular, they are more cost-effective than the modular Series KM A and KM D (which offer a wide range of interchangeable capsule heads for analog and digital output stages).

Despite its attractive pricing, the Series 180 offers state-of-the-art Neumann engineering: pristine sound with very low self-noise and high SPL capability. The innovative head amplifier offers a wide dynamic range and is carefully designed to maintain the capsule's sonic integrity. The transformerless output stage can drive long cable runs of up to 300 meters (1000 feet) without transmission losses.

KM 183:

Max SPL	140 dB
S/N Ratio	81 dB
Sensitivity	12 mV/Pa

KM 184:

Max SPL	138 dB
S/N Ratio	81 dB
Sensitivity	15 mV/Pa

KM 185:

Max SPL	142 dB
S/N Ratio	79 dB
Sensitivity	10 mV/Pa

KM 183 KM 184 KM 185



DIRECTIONAL CHARACTERISTICS

The KM 183 is an omnidirectional microphone, equalized for a linear response in the diffuse sound field; in the free field (i.e. close to the sound source) it has a treble boost of approximately 7 dB at 10 kHz. As a pressure transducer the KM 183 has a linear, virtually unlimited bass response with no proximity effect.

The KM 184 is a cardioid microphone with a very smooth and linear frequency response. It uses the same capsule design as the eminent Neumann classic KM 84, enhanced by a slight treble lift around 9 kHz for added brilliance. Its cardioid pattern is frequency-independent; in practical usage there is no sound coloration over a wide pickup angle. Rejection of rearward sound (180°) is excellent, even at low frequencies.

The KM 185 is a hypercardioid microphone with sound characteristics similar to the KM 184. Its higher directivity makes the KM 185 an excellent problem solver for demanding applications such as minimizing spill in multi-microphone setups (e.g. drum recording). Minimum sensitivity occurs at 120°.

APPLICATIONS

The KM 183, KM 184, and KM 185 are universal microphones for many applications, such as piano, percussion, drums, acoustic guitar, upright bass, violin, cello, woodwinds, brass, and other acoustic instruments. Thanks to their superior off-axis behavior, the Series 180 microphones are excellently suited for stereo and surround recording with perfect imaging. The KM 184 and 185 are often used for classical vocals and speech.

THE MASTER CLASS FOR INSTRUMENTAL RECORDINGS.



VARIANTS:







All capsules and output stages are available in nickel and nextel® black in wooden boxes.

The output stages come with a swivel mount and windscreen.

Two popular combinations are offered as complete sets with capsule, output stage, swivel mount and windscreen: KM 183 A nx and KM 184 A nx

SYSTEM KM A



Concert Hall | Prof. Recording Studio | Film/Foley/Voice Over | Broadcast | Live Show (PA)

THE MODULAR MICROPHONE SYSTEM KM A

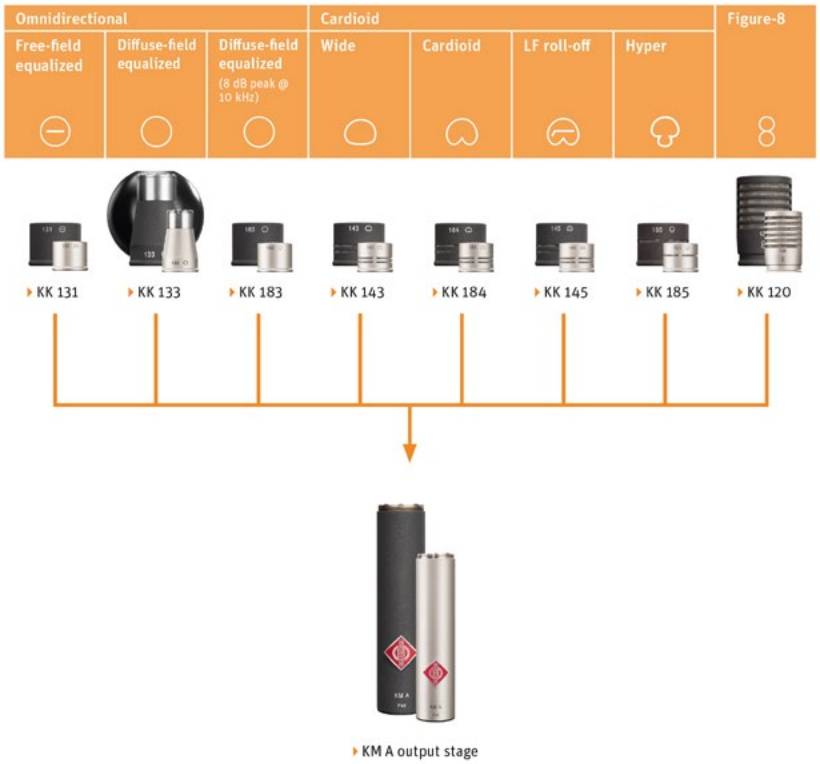
- Eight different capsules for the most diverse applications
- Separate output stage
- Great variability through a comprehensive range of accessories



System KM A

MAXIMUM FLEXIBILITY

The Neumann system KM A is a modular microphone system for even the most demanding applications. Eight different small diaphragm capsules (KK 120 ... KK 185) may be combined with the analog output stage KM A. All components are available in nickel or Nextel black (nx). A comprehensive range of accessories ensures adaptability to the most diverse fields of application.

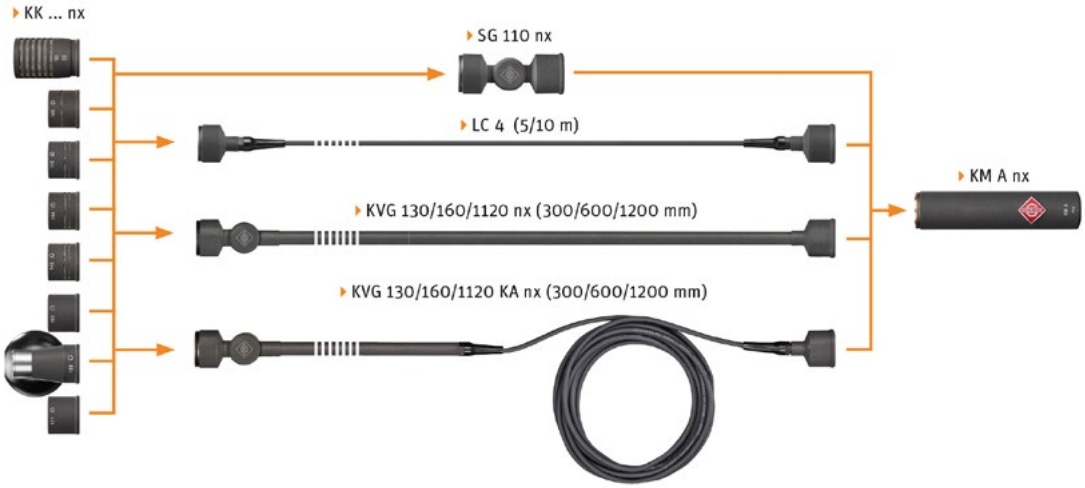




MAXIMUM FLEXIBILITY.

Compared to its predecessor, the Series KM 100, the new system KM A works with passive capsules, which are considerably smaller while retaining the proven acoustic design. New and advanced electronic components allow for many electroacoustic and operational advantages, such as reduced self-noise, an extended dynamic range, and very high electromagnetic immunity.

The modular concept permits the capsule to be detached and used at a distance from the output stage of up to 100 m (330 ft), connected via a special cable. For usual applications, the LC 4 cable is available with a length of 5 or 10 meters (ca. 16½ or 33 ft.). Alternatively, capsule extensions of various lengths, swivel capsule joints, and swivel stand mounts, etc. may be used for a flexible microphone setup. The analog and digital output stages have identical dimensions (diameter: 22 mm, length: 93 mm). All accessory parts may thus be combined with both output stages.



THE OUTPUT STAGE

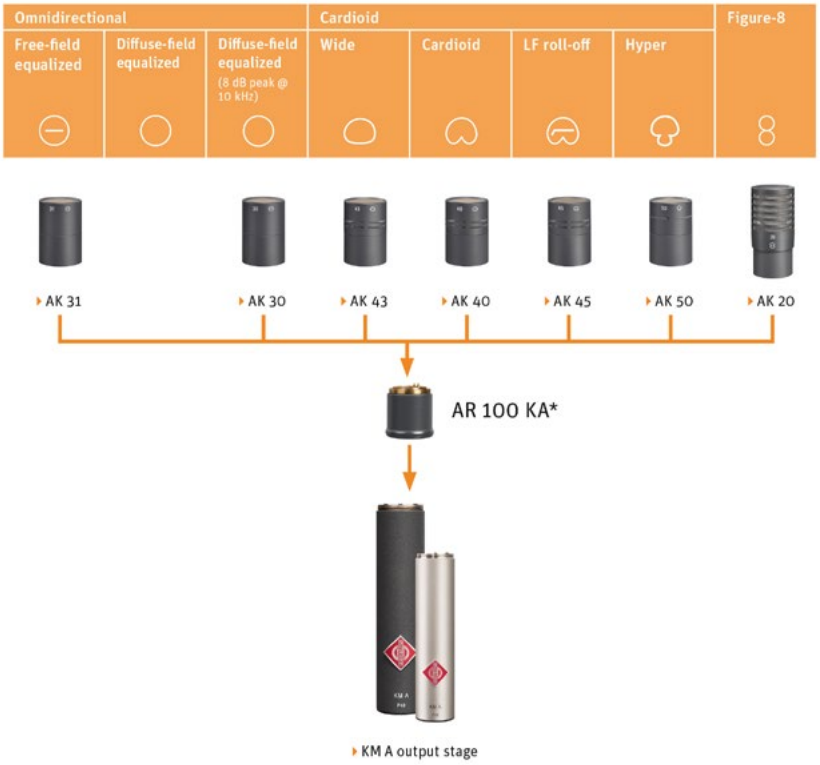
The analog, transformerless output stage KM A operates with P48 phantom power. A switchable -10 dB preattenuation allows for sound pressure levels of up to 152 dB (depending on capsule type) without distortion artifacts.

Two popular combinations are available as complete sets with capsule, output stage and swivel mount: KM 183 A nx and KM 184 A nx. Any other components are offered separately.

SYSTEM KM A

COMPABILITY WITH THE NEUMANN KM 100 SYSTEM

On special request, a mechanical adapter (AR 100 KA) can be supplied for use of older KM 100 capsules (AK series) with the KM A output stage.



* The AR 100 KA adapter connects any AK capsule to the KM A output stage and is available on request.

ACOUSTIC PROPERTIES

The KM A system combines modern electronic design with the pristine and neutral sound that made Neumann's small diaphragm microphones are famous. Typical fields of applications are recordings of acoustic stringed instruments, brass and woodwinds, percussion, cymbals (drums overheads) as well as room ambience and speech.

All capsules are characterized by very low off-axis coloration, not least the KK 184 cardioid capsule, which is based on the eminent Neumann classic KM 84. Due to their excellent low frequency response, the pressure transducers KK 131, KK 133, and KK 183 are perfectly suited for orchestra and choir recordings.

The KK 133, in particular, is a unique capsule for such applications. Based on the technical design concept of the legendary Neumann M 50 microphone and its successor, the M 150, its ultra thin diaphragm is made of titanium and is spaced only a few microns from the backplate, also made of titanium. The KK 133 capsule attains an incredibly fast transient response with unprecedented accuracy. Its detachable sound diffraction sphere creates an earlier and gentler increase in sound pressure for mid to high frequencies. Directivity, thus, increases in the upper frequencies, as with a cardioid capsule, yet as a pressure transducer the KK 133's bass transmission is linear down to the lowest frequencies, with no proximity effect.



KK 120

The KK 120 is a pressure gradient transducer with figure-8 characteristic, side-addressed. The figure-8 pattern is realized with a single 16 mm diaphragm. Thus, all sound field components reach the diaphragm directly. As a result, the frequency response curves and sensitivities for 0° and 180°are identical. The KK 120 capsule may be combined with other capsules/microphones for MS-stereo recording.

KK 120 + KM A:

Max SPL	150 dB
S/N Ratio	79 dB
Sensitivity	12 mV/Pa



KK 131

The KK 131 is a free-field equalized pressure transducer. The sensitivity in the free sound field is flat up to 20 kHz. In the diffuse sound field, there is a roll-off above 5 kHz.

KK 131 + KM A:

Max SPL	150 dB
S/N Ratio	81 dB
Sensitivity	12 mV/Pa



KK 133

The KK 133 is a diffuse-field equalized pressure transducer with a free-field treble boost (4-5 dB at 12 kHz). The detachable sound diffraction sphere provides a very smooth treble rise, and gradually increases the directivity at higher frequencies.The frequency response in the diffuse sound field is flat up to 12 kHz. The capsule is made of titanium.

KK 133 + KM A:

Max SPL	148 dB
S/N Ratio	79 dB
Sensitivity	15 mV/Pa



KK 143

The KK 143 is a pressure gradient transducer with wide-angle cardioid characteristic. Attenuation: 4 dB at 90°, 8 dB at 135°, and 11 dB at 180°. The frequency response for sound sources within an angle of ± 90° (off axis) is parallel up to 12 kHz.

KK 143 + KM A:

Max SPL	148 dB
S/N Ratio	81 dB
Sensitivity	15 mV/Pa



KK 145

The KK 145 is a pressure gradient transducer with cardioid characteristic just like the KK 184. However, it has an acoustic bass roll-off in the free field and therefore suppresses LF interference (wind, structure-borne noise). Since proximity effect is a natural feature of pressure gradient microphones, the KK 145 is optimized for a flat frequency response at a recording distance of approximately 15 cm (»speech cardioid«).

KK 145 + KM A:

Max SPL	148 dB
S/N Ratio	80 dB
Sensitivity	14 mV/Pa



KK 183

The KK 183 is a diffuse-field equalized pressure transducer with a free-field treble boost (approx. 7 dB at 10 kHz). The frequency response in the diffuse sound field is flat up to 10 kHz.

KK 183 + KM A:

Max SPL	150 dB
S/N Ratio	81 dB
Sensitivity	12 mV/Pa



KK 184

The KK 184 is a pressure gradient transducer with cardioid characteristic. The frequency curves are very even and parallel to 0° sound incidence. In typical usage, there is no coloration of sound over a wide pickup angle.

KK 184 + KM A:

Max SPL	148 dB
S/N Ratio	81/80 dB
Sensitivity	15 mV/Pa



KK 185

The KK 185 is a pressure gradient transducer with a hypercardioid characteristic. Attenuation of sound incidence from the side or rear is approximately 10 dB. Minimum sensitivity occurs at an angle of about 120°.

KK 185 + KM A:

Max SPL	152 dB
S/N Ratio	78/79 dB
Sensitivity	10 mV/Pa

TABLETOP APPLICATIONS

One of the most varied applications is as a speaker's microphone on a table. Usually the microphone should be placed so that it is inconspicuous or even invisible, especially in television, while delivering optimum signal quality. Moreover, body noise and wind noise should be suppressed effectively.

The preferred capsule for speech applications is the KK 184 cardioid, or, in rooms with strong reflections, loud environments, or in case of table reflections, the KK 185 hypercardioid. With the latter, it is also a question of whether the specific geometry (incident angle) of the table reflections is such that the hypercardioid offers the best cancellation (± 120°).

The KK 145 »speech cardioid« is the right choice for extremely close distances (< 10 cm). This mic capsule has a frequency response that has been optimized to deliver balanced response even at extremely close distances.

To pick up several speakers at the same time, for example, in the context of a round-table discussion, the KK 143 wide-angle cardioid can be used to cover a wider angle or the KK 183 omnidirectional can be used to cover an omnidirectional field. If there are only two speakers, then occasionally the bidirectional KK 120 with figure-eight characteristic, which completely suppresses sounds coming from the side, is set up between the two speakers.

If the microphone is positioned very close to the speaker, then windscreens and pop filters should be used.

SMALL SETUPS

A typical example for use of small setups is miking a television news anchor. The mic should be inconspicuous, and yet its directional pattern should reject noise and possible table reflections.



KK 184 nx + KM A nx
+ SG 21 bk + MF 3

THE SIMPLEST VARIANT

The simplest and most cost effective variant is to use the SG 21 bk clamp to mount the entire microphone on a table stand, for example, the MF 3 table stand.



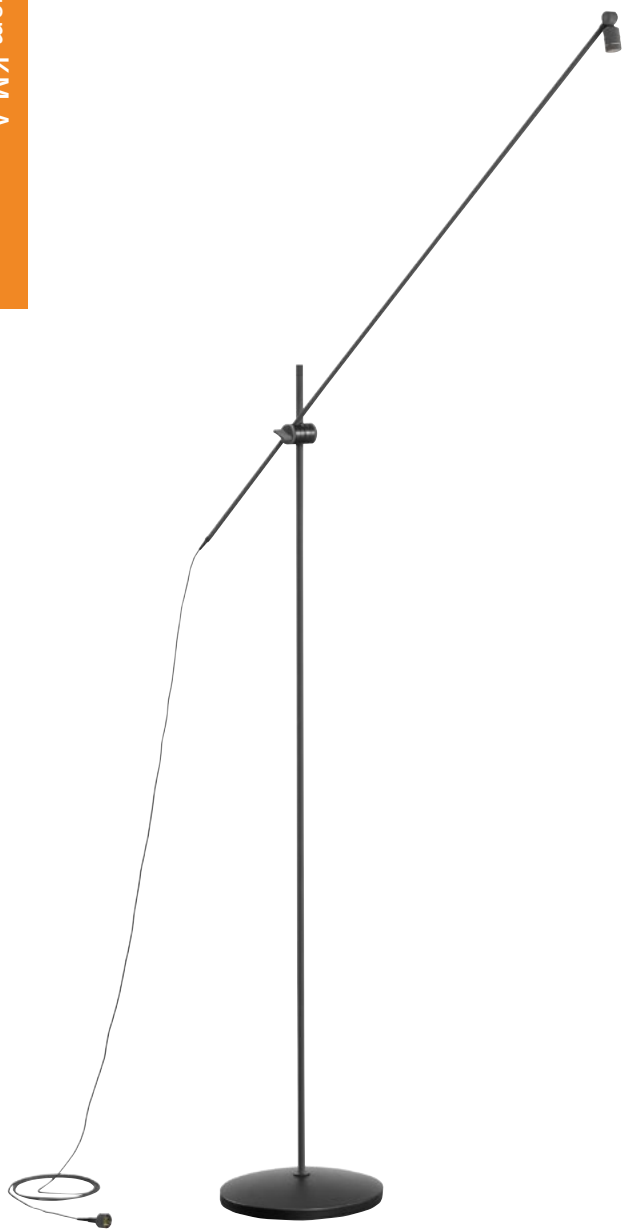
KK 184 nx + SGE 100
+ LC 4 + MF 2

THE SMALLEST VARIANT

In this combination the capsule with extension cable LC 4 is attached to the SGE 100 stand mount. The MF 2 table stand rests on a shock-absorbing cellular rubber pad. Moreover, it incorporates rubber mount for additional suppression of body noise.

STAND-BASED SOLUTIONS

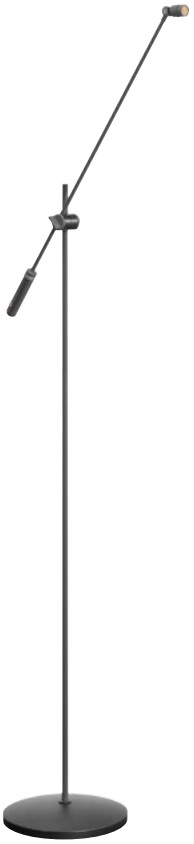
Stand-based solutions are configurations in which a microphone used as a speaker's microphone stands in an open space or at a lectern. However, this also includes setups for miking instruments in an orchestra, etc.



KVG 1120 KA nx + MF 5 + MZEF 8210
+ MZGE 8000 + KK 184 nx

THE OVERHEAD VARIANT

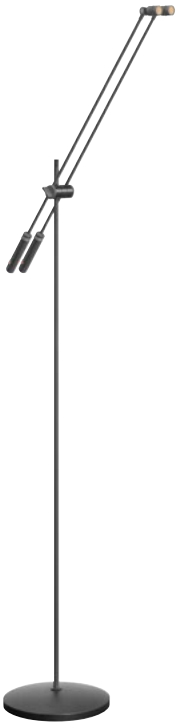
The rotatable head of the KVG … and KVG … KA capsule extension also permits overhead miking by aiming the microphone at the instrument from above, as it is the usual practice with strings.



KVG 160 nx + MF 5 + MZEF 8120
+ MZGE 8000 + KK 184 nx

THE ELEGANT VARIANT

A unobtrusive setup for singers and speakers can be realized using the KVG 160 nx or KVG 1120 nx capsule extension. This is snapped onto a MZGE 8000 stand mount and mounted on a MZEF 8120 vertical bar.



2x KVG 160 nx + MF 5 + MZEF 8120
+ 2x MZGE 8002 + 2x KK 184 nx + 2x KM A nx

THE FAILSAFE VARIANT

Certain critical applications require increased operational reliability through doubled microphones. With the help of the MZGE 8002 double mount, two capsule extensions can be mounted parallel to one another.

When miking instruments or multiple speakers, the capsules can also be oriented in varying directions and thus, for example, cover different sections of an orchestra.

STEREO APPLICATIONS

The KM A system accessories make it possible to realize compact setups for all common stereo configurations. The accessories described below can simply be mounted to any stand, preferably with a shock-absorbing rubber pad. If necessary, the Z 26 mt shock mount can also be inserted to reduce body sound transmission even further.



DS 120 + 2x SG 21 bk + 2x KM 184 A nx

AB CONFIGURATION

The DS 120 double mount can also be used for (small) time based AB stereo setups. The microphones are mounted with the swivel mounts on the double mount with a definite spacing and any angle of the user's choosing.



STH 100 + 2x LC 4 + 2x KK 184 nx

XY CONFIGURATION

The easiest way to position two capsules coincidentally is by using the 'XY clamps' of the STH 100 stereo mount. This permits variation of the included angle between the two capsules within a range of 30° to 180°, while keeping the centers of the membranes always positioned ideally over and under one another. When mounted on a table stand, this is the smallest possible solution at all.



DS 120 + 2x SG 21 bk + 2x KM 184 A nx

For complete microphones an XY configuration is realized using the DS 120 double mount. The microphones in the SG 21 mt stand mount are snapped onto the double mount. The double mount, which is likewise adjustable over a large range of angles, is mounted on a table stand or stand. The capsules are positioned next to one another.



STH 100 + 2x LC 4 + 2x KK 184 nx

ORTF CONFIGURATION

The »ORTF clamp« of the STH 100 stereo mount holds two capsules in the standard ORTF configuration with an included angle of 110° between membranes. The DS 120 double mount can be used for complete microphones.



STH 120 + 2x LC 4
+ KK 120 nx + KK 184 nx

MS CONFIGURATION

The STH 120 stereo mount makes it possible to position two capsules in an »over/under« configuration and orient them in relation to the sound source using the ball joint on the mount.



DS 120 + 2x SG 21 bk
+ 2x KK 120 nx + 2 x KM A nx

BLUMLEIN CONFIGURATION

The so-called Blumlein configuration is a special type of XY technique with two microphones with a figure-eight characteristic positioned above one another and an included angle of 90°. This is easy to realize with a DS 120 double mount attached to a horizontal boom. The two microphones or capsules are screwed onto the DS 120 in their swivel mounts.

SUSPENDED VARIANTS

Frequently it is necessary to position microphones as inconspicuously as possible without using a stand. Overhead variants in which the microphone is suspended from the ceiling are ideal in such situations. Thanks to their low weight, the miniature microphones of the KM A series can be fastened by their own cables without any problems.
The same holds true for the LC 4 cable (just 3.5 mm thick) used to connect the detached capsules to the output stage. Using an additional thread, it is possible to attain precise and stable positioning of the microphone(s).

Especially in concert halls and theaters, suspended microphones are frequently used as permanent installations, both above the orchestra and for miking the reverberations in the hall and the audience.



STH 100 + MNV 87 mt + 2x KK 184 nx + 2x LC 4



MNV 21 mt + KM 184 A nx + XLR cabel

THE SIMPLEST VARIANT

The MNV 21 mt auditorium hanger holds the complete microphone and swivels to permit adjustment. The microphone cable is held by a clamp device, and the entire setup is suspended from the ceiling.



MNV 100 + KK 184 nx + LC 4

THE SMALLEST VARIANT

A capsule is connected to the output stage using the LC 4 cable. The plug end of the cable snaps into the MNV 100 auditorium hanger. The clamp swivels to permit adjustment of the capsule. The cable is held in place by the clamp of the MNV 100 and the entire setup is suspended from the ceiling.



MNV 87 mt + EA 2124 A mt + KM 184 A nx + XLR cabel

THE ELASTIC VARIANT

If additional mechanical decoupling from the ceiling is required, then the microphone can also be suspended from the ceiling in an elastic suspension. On the one hand, any accessory can be screwed onto the 1/2« threaded neck of the MNV 87 mt auditorium hanger, while on the other hand, the entire setup can be suspended from its own cable. For example, a complete microphone in an EA 2124 A mt elastic suspension can be mounted on the MNV 87 and suspended from the ceiling on its own cable.

STEREO SETUPS

The MNV 87 mt auditorium hanger also makes it possible to connect the STH 100 (for XY and ORTF stereophony) or STH 120 stereo mount (for MS stereophony) to the microphone cable. This makes it possible to suspend a nearly invisible stereo setup right from the ceiling and swivel it into the correct orientation.

Of course, it is also possible to suspend the DS 120 double swivel mount.

WINDSCREENS

Not only in outdoor work, but also in indoor work with close miking, unexpected low-frequency noise may occur due to the rustling of manuscript pages right in front of the microphone, fishpole movement, air conditioning, etc. Then effective pop screens or windscreens are indispensable.

Note: Due to physics, pressure transducers (KK 131, KK 183) are considerably less prone to wind and popping noise than pressure gradient transducers. Thus microphones of the first type are preferable for use in such situations.



WNS 100 + KM 184 A nx
+ SG 21 bk + MF 3

THE STANDARD VARIANT

The WNS 100 windscreen is included with every output stage. This is sufficient protection against light winds and popping, with minimal effect on frequency response, and that only in the very highest frequencies.



WNS 110

WNS 110

Compared to the WNS 100, the WNS 110's attenuation of wind noise is increased by 3 dB, while high frequencies are damped even less.



WS 100 + KM 184 A nx
+ SG 21 bk + MF 3

WS 100

The WS 100 windscreen, which measures 9 cm in diameter, provides a markedly better protection against stronger wind than the WNS 100 does, but also has more of an effect on high frequencies. Additionally, a foam windscreen always has some effect on the directional characteristics, causing them to shift somewhat toward an omnidirectional pattern.



VARIANTS:





The KMR 81 i microphone is available with either matte black or nickel finish incl. foam windscreen.

A microphone stand and swivel mount is not part of the delivery scope.

KMR 81 i

Film/ Foley/ Voice Over

Broadcast

SHORT SHOTGUN MICROPHONE FOR FILM DIALOGUE AND ENG

- Shotgun microphone for medium distances
- Lobe shaped pattern with 90° pickup angle
- High directivity without off-axis coloration



KMR 81 i

KMR 81 i:

Max SPL 138 dB

S/N Ratio 82 dB

Sensitivity 18 mV/Pa

Pad

PRISTINE DIALOGUE, UNCOLORED SOUND

The KMR 81 i is a shotgun microphone for medium distances, e.g. for film dialogue with a clear and focused sound while the microphone is placed outside the picture. Off-axis coloration is minimized to avoid sound change when actors are moving. The KMR 81 i offers high sensitivity with low power consumption and is lightweight for easy handling.

A PROBLEM SOLVER WITH A TOUCH OF CLASS

The KMR 81 i is a shotgun microphone with a high directivity for situations that require the microphone to be kept at a distance from the source. This is often the case in electronic news gathering (ENG) and film dialogue recording, where the microphone must remain invisible. The KMR 81 i can also be used to obtain a clear and focused sound in noisy environments.

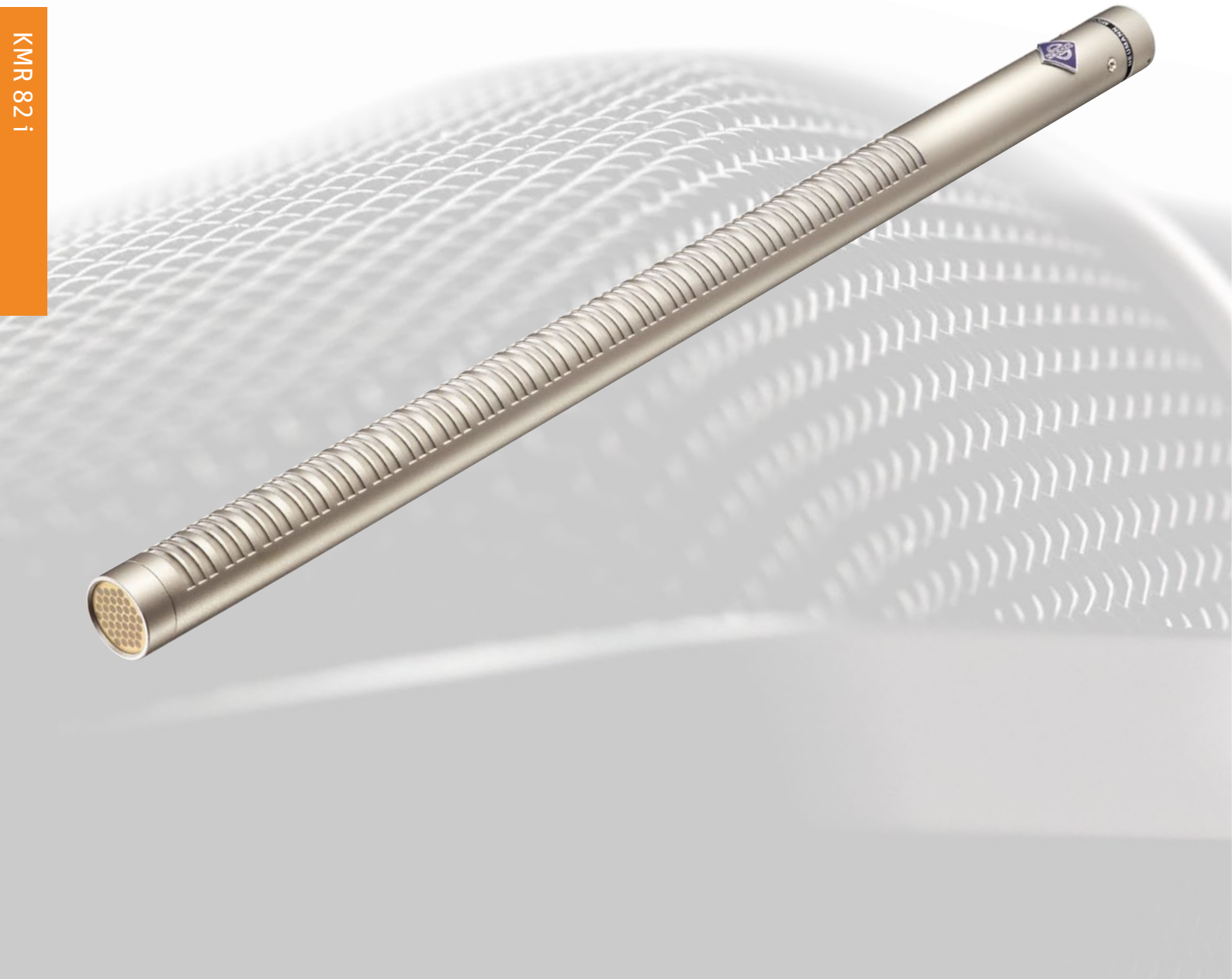
Technically speaking, the KMR 81 i combines a pressure gradient condenser capsule with a medium-length interference tube to achieve a narrow acceptance angle of 90° and excellent rejection of unwanted sound. Unlike many other shotgun microphones, the Neumann KMR 81 i's lobe shaped pickup pattern is frequency-independent. In other words, off-axis sound is picked up at reduced level but without unwanted coloration. This makes it easy to correct a misaligned microphone in postproduction.

Compared to other shotgun microphones, the Neumann KMR 81 i offers a more natural sound image. Its frequency response is highly linear up to 2 kHz while a broad treble lift compensates for high frequency losses that occur when recording at greater distances. The KMR 81 i offers very low self-noise of only 12 dB-A and a high sensitivity of 18 mV/Pa, which can be reduced by 10 dB to protect the microphone input from overload. The KMR 81 i can handle high SPLs of up to 128 dB without audible distortion (138 dB SPL with the preattenuation switch engaged). A second switch activates a 200 Hz low cut to compensate for the proximity effect when the KMR 81 i is use at short distances.

APPLICATIONS

The KMR 81 i is primarily designed for film and broadcast applications. It is an excellent microphone for movie dialogue both in the studio and on location. The KMR 81 i is very lightweight and has a balanced center of gravity, making it a pleasure to use, even after several hours. Due to its low power consumption and its low sensitivity to wind and handling noise, the KMR 81 i is excellently suited for on-location work. Thanks to its natural sound and excellent off-axis behavior, the KMR 81 i can also be used as a problem solver in critical recording situations, e.g. to pick up a soloist in front of an orchestra.

A PROBLEM SOLVER FOR MEDIUM DISTANCES.



VARIANTS:





The KMR 82 i microphone is available with either matte black or nickel finish incl. foam windscreen.

A microphone stand and swivel mount is not part of the delivery scope.

KMR 82 i



Film/ Foley/ Voice Over Broadcast

HIGHLY DIRECTIONAL SHOTGUN MICROPHONE FOR RECORDING FROM LONGER DISTANCES.

- Shotgun microphone for longer distances
- Lobe shaped pattern with 45° pickup angle
- Very high directivity without off-axis coloration



Max SPL 128 dB

S/N Ratio 82 dB

Sensitivity 21 mV/Pa



LONG DISTANCE SPECIALIST

The KMR 82 i is a shotgun microphone for longer distances, e.g. in ENG and stage applications. With an acceptance angle of 45° and minimal off-axis coloration the KMR 82 i can be used to record individual instruments in an orchestra without problems. The KMR 82 i offers high sensitivity with low power consumption and is lightweight for easy handling.

CLEAR AND FOCUSED SOUND FROM A DISTANCE

The KMR 82 i is a shotgun microphone with a very high directivity for situations that require the microphone to be kept at a greater distance from the source. This is often the case in electronic news gathering (ENG) and in theaters, where microphones ought to remain invisible. The KMR 82 i can also be used to obtain a clear and focused sound in noisy environments.

Technically speaking, the KMR 82 i combines a pressure gradient condenser capsule with a long interference tube to achieve a very narrow acceptance angle of 45° and excellent rejection of unwanted sound. Unlike many other shotgun microphones, the Neumann KMR 82 i's lobe shaped pickup pattern is frequency-independent. In other words, off-axis sound is picked up at reduced level but without unwanted coloration. The KMR 82 i therefore sounds uncommonly natural for a long shotgun microphone and is easy to combine with other microphones, without unwanted side effects.

Compared to other shotgun microphones, the Neumann KMR 82 i offers a superior sound balance. Its frequency response is highly linear up to 2 kHz, while a broad treble lift compensates for high frequency losses that occur when recording at greater distances. The KMR 82 i offers very low self-noise of only 12 dB-A and a high sensitivity of 21 mV/Pa. The KMR 82 i itself can handle high SPLs of up to 128 dB without audible distortion. A high pass filter suppresses subsonic interference, such as wind and handling noise. For use at shorter distances, the filter frequency can be shifted to 120 Hz using the low cut switch to compensate for the proximity effect. To avoid sibilance problems in cases when the KMR 82 i is used for close speech, a second switch activates an electronic filter which compensates for the capsule's treble boost.

APPLICATIONS

The KMR 82 i is an excellent microphone for theater and broadcast applications, such as stage dialogue, and for ENG in noisy environments. The KMR 82 i is very lightweight and has a balanced center of gravity, making it a pleasure to use, even after several hours. Due to its low power consumption and its low sensitivity to wind and handling noise, the KMR 82 i is perfect for on-location work. Thanks to its natural sound and excellent off-axis behavior, the KMR 82 i can also be used as a problem solver in critical recording situations, e.g. to pick up a soloist in front of an orchestra.

LONG DISTANCE SPECIALIST.





The BCM 104 is available in nickel.

A studio boom arm is not part of the delivery scope.

BCM 104



Broadcast

THE STATE OF THE ART BROADCAST MICROPHONE FROM NEUMANN

- Specially designed for radio announcers
- All-new speech optimized condenser capsule
- Integrated pop-screen and elastic suspension



Max SPL 152 dB

S/N Ratio 87 dB

Sensitivity 22 mV/Pa



THE PERFECT GATEWAY TO YOUR LISTENERS

The BCM 104 is a dedicated broadcast microphone for radio announcers and DJs, designed to convey emotion with Neumann perfection. Its functionally optimized design features an integrated pop screen and a shock protected large diaphragm condenser capsule, specially developed for speech. Transformerless circuitry ensures a direct, noise-free sound.

YOU SPEAK – THE WORLD LISTENS

Broadcast is a much more immediate way to reach the listeners than studio recording. That's why Neumann decided to develop a microphone that specifically addresses the needs and working conditions of radio DJs, announcers, newscasters, talk show hosts, and all those who guide us through the day with their stories, good vibes, and the latest information.

The BCM 104 is designed to convey emotion with perfection. Its characteristic shape is functionally optimized for use with industry standard microphone boom arms. Thanks to its elastic mount, the BCM 104 is well protected against structure borne noise. An integrated pop screen behind the headgrille protects the capsule from air blasts and plosives. For increased hygiene, the headgrille twists off easily for quick cleaning.

The large diaphragm condenser capsule of the BCM 104 captures each nuance of your voice without coloration or unwanted artifacts. The BCM 104's electronic circuit has an extremely low self-noise of only 7 dB-A and can handle enormous sound pressure levels of up to 138 dB without distortion. Its balanced output operates transformerless to ensure minimal hum interference and high common mode rejection against extraneous signals e.g. from computer screens. A subsonic filter suppresses frequencies below 20 Hz. For close speech operation, an optional 100 Hz low cut is available to compensate for the proximity effect. A second switch activates a –14 dB preattenuation to reduce the BCM 104's output level for use with equipment designed for dynamic microphones (which typically have a much lower sensitivity than condenser microphones). Both switches are hidden inside the microphone as the low cut and preattenuation options are usually selected only once, at setup.

DESIGNED FOR THE HUMAN VOICE

The BCM 104 has a fixed cardioid pattern with excellent rejection of rearward sound. Its frequency response is very linear with a gentle presence boost around 4 kHz and a slight treble lift above 10 kHz for enhanced speech intelligibility. Due to its outstanding transient response, the BCM 104 captures each nuance of the human voice with stunning detail. Because of its wide frequency response, the BCM 104 can be used for much more than speech applications, e.g. sung vocals and a wide variety of instruments.

YOU SPEAK – THE WORLD LISTENS.





The BCM 705 is available in nickel.

A studio boom arm is not part of the delivery scope.

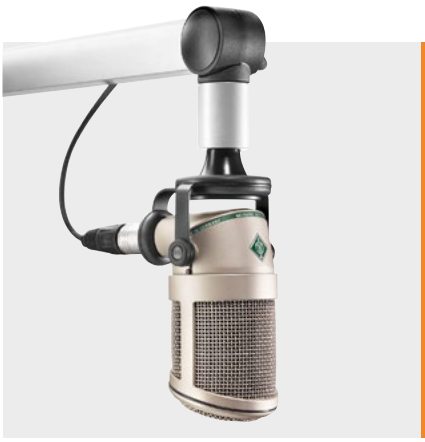
BCM 705



Broadcast

THE DYNAMIC BROADCAST MICROPHONE FOR THAT CLASSIC »AMERICAN« ANNOUNCER VOICE

- Specially designed for radio announcers
- Dynamic capsule, works without phantom power
- Integrated pop screen and elastic suspension



BCM 705

Max SPL 150 dB

S/N Ratio 76 dB

Sensitivity 1.7 mV/Pa

THE RIGHT TOOL FOR THE JOB

The BCM 705 is a cost effective broadcast microphone for in-studio speech applications. Its entire construction is functionally optimized to convey emotion with technical perfection. Its dynamic capsule is voiced for a smooth yet clear sound. The hypercardioid pattern along with the internal shock mount and pop filter minimize extraneous noises.

EMOTION WITH PERFECTION

Broadcast is a much more immediate way to reach the listeners than studio recording. That's why Neumann decided to develop a line of microphones that specifically addresses the needs and working conditions of radio DJs, announcers, newscasters, talk show hosts, and all those who guide us through the day with their stories, good vibes, and the latest information.

The BCM 705 is designed to convey emotion with perfection. Its characteristic shape is functionally optimized for use with industry standard microphone boom arms. Thanks to its elastic microphone mount and a newly designed internal capsule suspension, the BCM 705 is doubly protected against rumble. An internal foam screen protects the capsule from »pops« as well as dirt, moisture and nicotine. For increased hygiene, the headgrille twists off easily for quick cleaning.

DYNAMIC

While its sibling, the red badged BCM 104, is a condenser microphone, the BCM 705 is a dynamic microphone with a moving coil capsule, indicated by a green Neumann logo. Dynamic capsules are quite sturdy, and while they sound less natural than condenser transducers, carefully designed specimens – such as this – exhibit a distinctive appeal which has become associated with »the sound of FM«, especially in the United States with its long standing tradition of private radio.

The BCM 705 is particularly well suited for local radio stations and small studios. Its hypercardioid pattern and close-speech optimized capsule help to keep extraneous noises off the air, even if the sound-proofing is less than perfect. The BCM 705's frequency response is specifically tailored for the human voice. A gentle presence boost above 2 kHz enhances speech intelligibility, while a soft bass roll-off compensates for the roximity effect, creating a low-end which is full but never boomy. The BCM 705 does not require phantom power and is extremely easy to setup: Simply connect it to a microphone input, and you're ready to go on air!

Although the BCM 705 is primarily designed for speech applications in broadcast environments, it wouldn't be a Neumann microphone, if it couldn't be used in the recording studio, too. Being a dynamic microphone, the BCM 705 can handle high SPLs with ease, which makes it an excellent choice for screaming vocalists, bright brass instruments, and loud guitar cabinets.

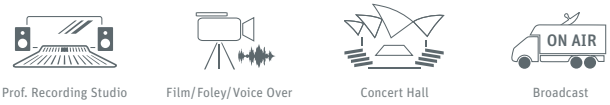
THE RIGHT TOOL FOR THE JOB.





The KU 100 is available in an aluminium case that includes the dummy head with a microphone and adapter cable. Also the plug-in mains unit is part of the delivery scope.

KU 100



Prof. Recording Studio | Film/Foley/Voice Over | Concert Hall | Broadcast

DUMMY HEAD MICROPHONE FOR A TRULY IMMERSIVE SOUND EXPERIENCE.

- Binaural stereo microphone for a 3D-sound experience
- Headphone playback optimized, loudspeaker compatible
- Diffuse field equalized
- Battery, external PSU, or phantom powering



KU 100

Max SPL 145 dB

S/N Ratio 78 dB

Sensitivity 20 mV/Pa



GET INSIDE THE SOUND

The KU 100 is a dummy head microphone for a truly immersive binaural listening experience with headphones. Although it uses only two channels, its spatial depiction appears three dimensional and shockingly realistic. The KU 100 can be used to great effect in music and audio drama productions. Moreover, KU 100 recordings are loudspeaker compatible.

THE EASIEST WAY TO CREATE 3D AUDIO

Conventional recording techniques attempt to transfer an acoustic event into the listener's environment. The result is often dissatisfactory because the original room is put into a second room. Dummy head recordings are a much more immediate experience, because they transfer the listener into the environment the acoustic event originally took place. Moreover, head related stereo recordings are truly immersive: While conventional stereo recordings are limited to left and right and, at best, a sense of depth behind those speakers, head related recordings create a three dimensional sonic image surrounding the listener.

The KU 100 dummy head is a binaural stereo microphone. Two omnidirectional condenser capsules are built into artificial ears mounted on an enclosure resembling a human head. KU 100 recordings played back over high quality headphones thus give the listeners an experience almost identical to what they would have heard with their own ears at the recording position, with stunning lateral and vertical localization and a breathtaking sense of space and a room decay that surrounds the listener. Immersive sound has never been easier: Simply place the KU 100 at the optimal listening position! Unlike older dummy head microphones, the KU 100 is compatible with loudspeaker playback, too, creating a stereo image similar to conventional microphones yet with a superior sense of space and depth.

Thanks to its state-of-the-art transformerless circuitry, the KU 100 has very low self-noise and can handle high sound pressure levels of up to 135 dB without audible distortion and up to 145 dB with the –10 dB preattenuation switch activated. A second switch offers three low cut options, 150 Hz, 40 Hz, and linear. Both switches affect both channels. The KU 100 has a balanced XLR 5 stereo output and unbalanced BNC outputs. Three powering options are available: P48 phantom power, internal battery, and external PSU (included).



APPLICATIONS

Due to its natural and transparent sound, the KU 100 can be used for all kinds of head related recordings. Typical applications range from classical recordings and radio drama productions to experimental pop and ambient recordings. In addition, the Neumann KU 100 is also often used for industrial applications, e.g. documenting and examining noise in automobiles or work places.

A TRULY IMMERSIVE SOUND EXPERIENCE.

EXCELLENCE IN SOUND

FOR ADDITIONAL PRODUCT INFORMATION PLEASE REFER TO

WWW.NEUMANN.COM

@neumann

@neumann.berlin

@user/GeorgNeumannGmbH

Directional characteristics:

- Omnidirectional
- Omni, free-field equalized
- Wide-angle cardioid
- Cardioid

All measurements were made with the cardioid setting.

- Figure-8
- Cardioid with high-pass
- Hyper/Supercardioid
- Shotgun
- Human Ear

Features:

- High-pass filter
- Switchable high-pass filter
- Low-pass filter
- R Remote control
- Pad Attenuation
- D Digital (AES42 output)

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