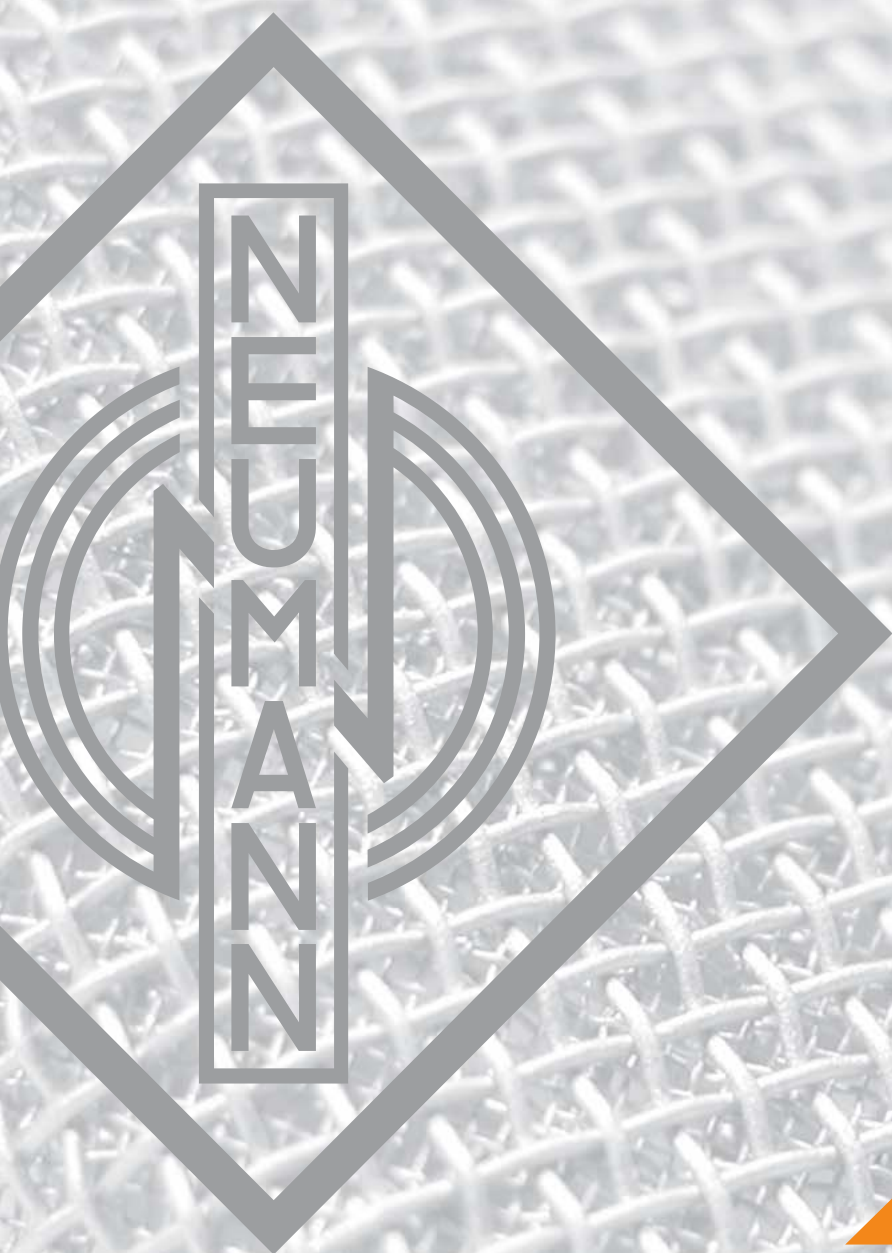


TLM 103

▶ **Large Diaphragm
Microphone**



www.neumann.com



The TLM 103 is the ideal large diaphragm microphone for all professional and semi-professional applications requiring the utmost in sound quality on a limited budget.

By utilizing the tried and true transformerless circuit found in numerous Neumann microphones, the TLM 103 features yet unattained low self-noise and the highest sound pressure level transmission. The capsule, derived from that used in the U 87, has a cardioid pattern, is acoustically well-balanced and provides extraordinary attenuation of signals from the rear.

The TLM 103 is available in satin nickel and matte black. Delivery includes an SG 1 metal swivel mount and a wooden jeweler's box.

Applications

Due to the universal cardioid pattern, straightforward handling, extremely low self-noise level, and finally, the price, the TLM 103 is predestined for all demanding applications from home recording to professional broadcasting and commercial recording studios.

Polar pattern

The TLM 103 is equipped with a large diaphragm capsule with cardioid pattern. By focusing on this pattern – used in most recording situations – the attenuation of unwanted rear sound has been optimized.

Off-axis sounds are rendered naturally while isolation is increased. This also leads to a high feedback suppression when the microphone is used in live situations or where loud-speaker playback is a factor.

Acoustic features

The TLM 103 is addressed from the front, marked with the red Neumann logo on the microphone body.

The K 103 large diaphragm capsule is based on the K 87, well known from the U 67 / U 87 microphones.

Features

- Large diaphragm cardioid microphone
- Pressure-gradient transducer with one-diaphragm capsule
- Transformerless circuitry
- Extremely low noise: 7 dB-A
- Includes swivel mount
- Straightforward handling for homerecording and professional studios
- High-quality professional equipment for limited budgets

Application Hints

- A universal cardioid mic
- Vocalist recording
- Announcer's mic for broadcasting/voice over
- Due to minimal self-noise: on-air mic for radio/broadcast, very low amplitude signals, radio drama, sampling, foley/sound effects
- Home recording and project studios
- Spot mic for wind instruments, strings, percussion, guitar amps, drum overhead

These are just some of the most common applications. We recommend additional experimentation to gain maximum use from this microphone.

Delivery Range

TLM 103 (mt) Microphone, SG 1 Stand mount swivel in Wooden box

Mono set: TLM 103 (mt) Microphone, EA 1 (mt) Elastic suspension in aluminium case

Stereo set: 2x TLM 103 (mt) Microphone, 2x EA 1 (mt) Elastic suspension in aluminium case

Studio set: TLM 103 (mt) Microphone, EA 1 (mt) Elastic suspension

Catalog No.

TLM 103	..... ni	..... 008430
TLM 103 mt	..... blk	..... 008431
TLM 103 Mono set	..... ni	..... 008508
TLM 103 mt Mono set	..... blk	..... 008509
TLM 103 Stereo set	..... ni	..... 008501
TLM 103 mt Stereo set	..... blk	..... 008502
TLM 103 Studio set	..... ni	..... 008545
TLM 103 mt Studio set	..... blk	..... 008544

Selection of Accessories

Power supply, N 248 (EU)	..... blk	..... 008537
Power supply, N 248 (US)	..... blk	..... 008538
Power supply, N 248 (UK)	..... blk	..... 008539
Auditorium hanger, MNV 87	..... ni	..... 006804
Auditorium hanger, MNV 87 mt	..... blk	..... 006806
Elastic suspension, EA 1	..... ni	..... 008449
Elastic suspension, EA 1 mt	..... blk	..... 008450
Popscreen, PS 15	..... blk	..... 008472
Popscreen, PS 20 a	..... blk	..... 008488
Microphone cable, IC 3 mt	..... blk	..... 006543
Microphone cable, IC 4	..... ni	..... 006547

A complete survey and detailed descriptions of all accessories are contained in the accessories catalog.

Meaning of color codes: blk = black, ni = nickel

The capsule has a flat frequency response up to about 5 kHz, and above that, a wide flat 4 dB presence boost.

The large wire mesh headgrille protects the capsule from plosive sounds and effectively prevents pop noises.

These characteristics are achieved without resorting to corrective resonance effects. Therefore, the microphone maintains an excellent impulse response and reproduces the finest details of music and speech without coloration.

Electrical features

With just 7 dB-A / 17.5 dB CCIR the self-noise level of the TLM 103 is so reduced that even the smallest signals are reproduced basically noise-free. As it is capable of handling sound pressure levels up to 138 dB without distortion, the TLM 103 provides a dynamic range of 131 dB (A-weighted).

The letters TLM stand for “transformerless microphone”. With TLM technology the usual output transformer is replaced by an electronic circuit.


As with traditional transformers, it ensures good common mode rejection, and prevents RF interference that may influence the balanced audio signal.

Operational safety

The entire internal construction is elastically mounted to attenuate any structure borne noise that could interfere with the TLM 103's operation. Furthermore the capsule is set on an elastic mount.

The frequency range reaches below 20 Hz and thus even very low bass signals are reproduced without coloration.

Due to this low frequency extension, the TLM 103 is more sensitive to structure borne interference and wind noise. For such cases, the elastic suspension EA 1 and the windscreen WS 87 are available as accessories. For close vocal use, the PS 15 or PS 20 a pop screens are recommended.



The design of the microphone is a registered design of the Georg Neumann GmbH in certain countries.



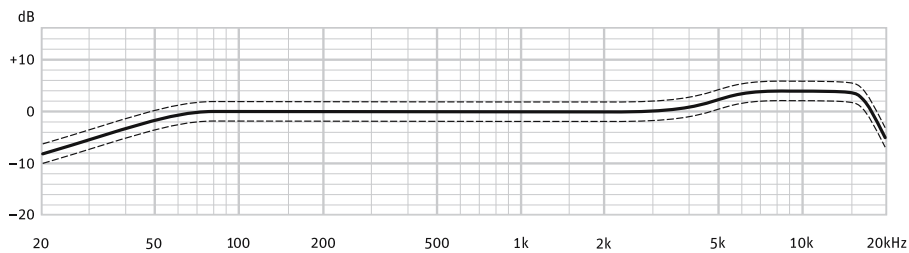
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TECHNICAL EXCELLENCE & CREATIVITY
OUTSTANDING TECHNICAL ACHIEVEMENT
MICROPHONE TECHNOLOGY

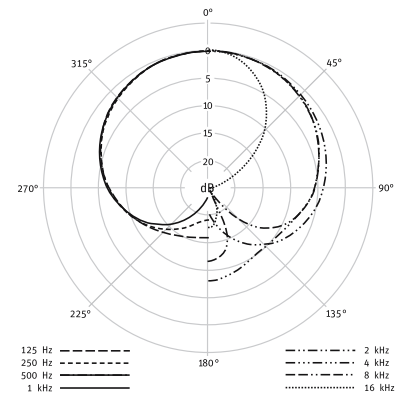
Neumann TLM 103

PRESENTED
BY
MIX
FOUNDATION

Technical Data



measured in free-field conditions (IEC 60268-4)

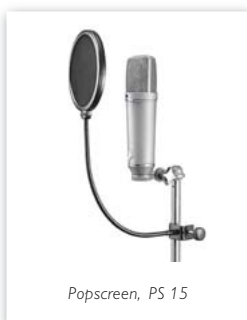
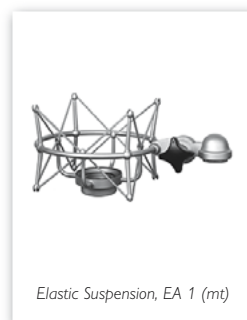


Acoustical operating principle Pressure gradient transducer
 Directional pattern Cardioid
 Frequency range 20 Hz...20 kHz
 Sensitivity at 1 kHz into 1 kohm 23 mV/Pa
 Rated impedance 50 ohms
 Rated load impedance 1000 ohms
 Signal-to-noise ratio, CCIR¹⁾ (rel. 94 dB SPL) 76.5 dB
 Signal-to-noise ratio, A-weighted¹⁾ (rel. 94 dB SPL) 87 dB
 Equivalent noise level, CCIR¹⁾ 17.5 dB
 Equivalent noise level, A-weighted¹⁾ 7 dB-A

Maximum SPL for THD 0.5%²⁾ 138 dB
 Maximum output voltage 13 dBu
 Dynamic range of the microphone amplifier (A-weighted) 131 dB
 Supply voltage (P48, IEC 61938) 48 V ± 4 V
 Current consumption (P48, IEC 61938) 3 mA
 Matching connector XLR3F
 Weight approx. 500 g
 Diameter 60 mm
 Length 132 mm

¹⁾ according to IEC 60268-1; CCIR-weighting according to CCIR 468-3, quasi peak; A-weighting according to IEC 61672-1, RMS ²⁾ measured as equivalent el. input signal

Selection of Accessories





NEUMANN.BERLIN

▶▶ THE MICROPHONE COMPANY

