

# TLM 49

▶ **Large Diaphragm  
Microphone**



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▶▶ THE MICROPHONE COMPANY



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

**T**he TLM 49 is a large-diaphragm studio microphone with a cardioid directional characteristic and a warm sound which is especially optimized for vocal performance. It is supplied as a set, with an elastic suspension.

The design is inspired by that of the legendary M 49 and M 50 microphones of the 1950s. Naturally the TLM 49 has the typical Neumann fine matte nickel finish. The “sound design” is also oriented toward that of the M 49 and the U 47.

By combining its retro look with proven Neumann transformerless circuit technology, this microphone ensures low self-noise and the use of high gain levels.

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### **Applications**

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During the development phase, the sound was adjusted in extensive practical tests, so as to make the TLM 49 ideal particularly for vocal and speech recording. However, in addition, it is also suitable for instrumental applications in professional production studios and demanding home recordings.

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### **Polar patterns**

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The large-diaphragm capsule of the TLM 49 provides a cardioid directional characteristic with a tendency toward supercardioid, due to the special capsule construction. Following the example of the M 49, high frequencies are more directional. The capsule diameter is 34 mm.

The front of the microphone is indicated by the red Neumann logo on the microphone body. The capsule is oriented so that the microphone is addressed from the front.

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### **Acoustic features**

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The TLM 49 uses the famous K 47 capsule, which was also used in the M 49 and the U 47. The capsule has a linear frequency response up to the upper mid-range. Above 2 kHz there is a gentle presence boost up to 3 dB.

The capsule is enclosed by a large microphone headgrille, which is acoustically very open and is hence neutral with regard to the sound.

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### **Electrical features**

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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.



Noise signals which affect the balanced modulation line are therefore effectively suppressed. The microphone can operate at sound pressure levels of up to 140 dB, and provides a dynamic range of 117 dB (A-weighted).

### Operational reliability

The entire interior structure is mounted elastically, to prevent the transmission of structure-borne noise. In addition, the capsule is mounted with a rubber shock mount.

Due to the wide frequency response, the TLM 49 can also transmit extremely low-frequency signals without coloration. Of course this means that the microphone is also sensitive to noise signals such as vibration noise and wind noise in this frequency range. The TLM 49 is therefore supplied with the elastic suspension EA 3, which effectively protects the microphone from structure-borne noise. If the microphone is addressed at extremely close range, pop screen PS 15 or PS 20 a can be used in front of the microphone to provide protection against plosive sounds.



### Features

- Sound profile optimized for vocal performance
- Pressure gradient transducer with the large-diaphragm capsule of the legendary U 47
- Cardioid characteristic
- Retro design
- Transformerless output circuitry
- Acoustically very open wire mesh headgrille
- Complete set with elastic suspension

### Application Hints

- Vocal microphone: Lends richness, power and brilliance to the voice, while remaining balanced and transparent
- Announcer's microphone for broadcasting, dubbing and voice-overs
- Spot microphone and for recording e.g. strings, piano and guitar

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





## Delivery Range

TLM 49 Microphone, EA 3 Elastic suspension

## Catalog No.

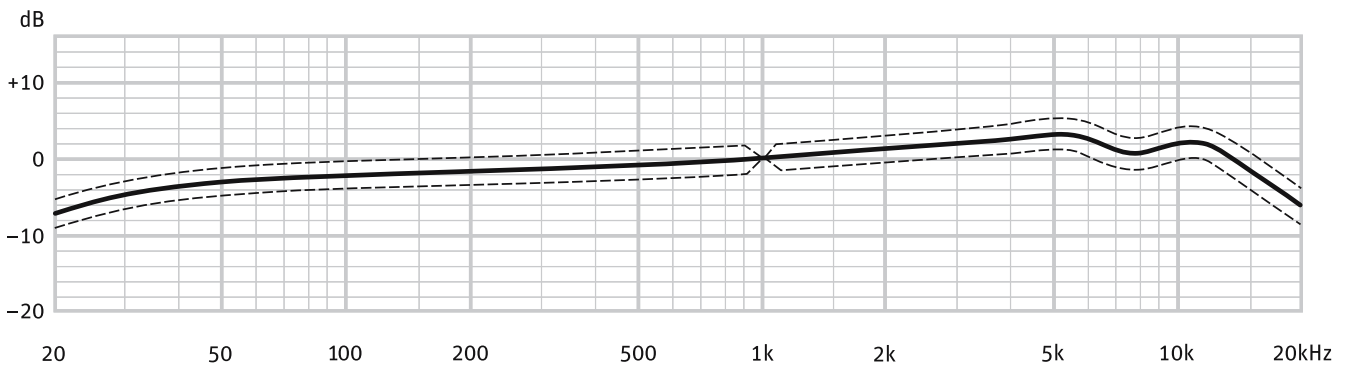
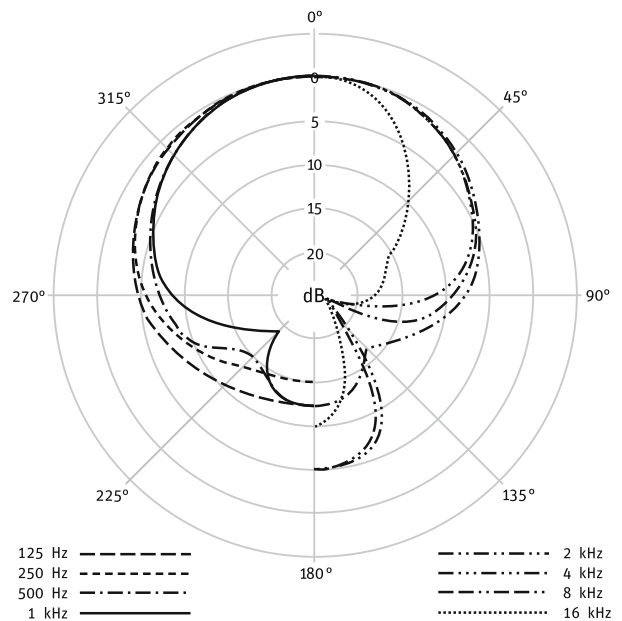
TLM 49 Set ..... ni ..... 008550

## Selection of Accessories

Power supply, N 248 (EU) ..... blk ..... 008537  
 Power supply, N 248 (US) ..... blk ..... 008538  
 Power supply, N 248 (UK) ..... blk ..... 008539  
 Battery supply, BS 48 i ..... blk ..... 006494  
 Auditorium hanger, MNV 87 ..... ni ..... 006804  
 Auditorium hanger, MNV 87 mt ..... blk ..... 006806  
 Popscreen, PS 15 ..... blk ..... 008472  
 Popscreen, PS 20 a ..... blk ..... 008488  
 Microphone cable, IC 3 mt ..... blk ..... 006543  
 Microphone cable, IC 4 ..... ni ..... 006547  
 Microphone cable, IC 4 mt ..... blk ..... 006557

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

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



## Technical Data

Acoustical operating principle ..... Pressure gradient transducer  
 Directional pattern ..... Cardioid  
 Frequency range ..... 20 Hz...20 kHz  
 Sensitivity at 1 kHz into 1 kohm ..... 13 mV/Pa  
 Rated impedance ..... 50 ohms  
 Rated load impedance ..... 1000 ohms  
 Signal-to-noise ratio, CCIR<sup>1)</sup> (rel. 94 dB SPL) ..... 71 dB  
 Signal-to-noise ratio, A-weighted<sup>1)</sup> (rel. 94 dB SPL) ..... 82 dB  
 Equivalent noise level, CCIR<sup>1)</sup> ..... 23 dB  
 Equivalent noise level, A-weighted<sup>1)</sup> ..... 12 dB-A

Maximum SPL for THD < 0.5%<sup>2)</sup> (THD < 7%<sup>2)</sup>) ..... 110 (140) dB  
 Maximum output voltage for THD < 7%<sup>2)</sup> ..... 11 dBu  
 Dynamic range of the amplifier (A-weighted, 0.5%<sup>2)</sup>) ..... 98 dB  
 Dynamic range of the amplifier (A-weighted, 5%<sup>2)</sup>) ..... 117 dB  
 Supply voltage (P48, IEC 61938) ..... 48 V ± 4 V  
 Current consumption (P48, IEC 61938) ..... 3.2 mA  
 Matching connector ..... XLR3F  
 Weight ..... 825 g  
 Diameter ..... 78 mm  
 Length ..... 165 mm

<sup>1)</sup> according to IEC 60268-1; CCIR-weighting according to CCIR 468-3, quasi peak; A-weighting according to IEC 61672-1, RMS <sup>2)</sup> measured as equivalent el. input signal, THD<sub>2</sub> dominant