

## **TLM 193**

**Large Diaphragm  
Microphone**





## Features

- Large diaphragm cardioid microphone
- Pressure-gradient transducer
- Transformerless circuitry
- Extremely low noise: 10 dB (A)
- Includes swivel mount
- The "plug and play" microphone for professional studios, musicians and homerecording applications
- High-quality professional equipment for mid-size budgets

The TLM 193 is a large diaphragm microphone with a cardioid polar pattern. With this microphone Neumann continues its long tradition, and is offering high end technology at an affordable price for musicians and the home recording studio.

The microphone uses a transformerless circuit, featuring extremely low self noise and large dynamic range.

The polar response is very linear over a wide incidence angle. Thus, even signals coming from the side are reproduced faithfully and without coloration.

The exposed surface of the microphone capsule is at ground potential, making it immune to typical interference and contamination. The microphone is supplied with a swivel mount.



## Applications

The TLM 193 is a microphone with cardioid characteristic for professional recording and live applications. It is the ideal microphone for professional productions, for musicians and project studios.

## Polar pattern

The TLM 193 has a large diaphragm capsule with cardioid characteristic.

## Acoustic features

The TLM 193 is addressed from the front, marked with the Neumann logo.

The large diaphragm capsule inside the headgrille has a very smooth frequency response for all polar patterns over a wide acceptance angle.

The curves are flat and parallel to the 0° frequency curve up to 10 kHz within a pickup angle of  $\pm 100^\circ$ .



# TLM 193

## Large Diaphragm Microphone

The TLM 193 differs from omnidirectional pressure transducers, where, due to physical reasons, the diffuse-field and free-field responses never agree.

This microphone has a very even diffuse-field response for all polar patterns. This is important in a reverberant environment, as more reflections arrive at the microphone from different directions.

The acoustic information is not affected in its tonal quality when recorded by the microphone. This characteristic is achieved without resorting to corrective resonance effects.

Therefore, the microphone maintains an excellent impulse response reproducing all transient phenomena of music and speech without coloration.

### Electrical features

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.

Compared to other microphones the self noise level of the TLM 193 is considerably reduced. As it is capable of handling sound pressure levels up to 140 dB without distortion, the TLM 193 provides a dynamic range of 130 dB, according to DIN/IEC 651.

### Operational safety

All exposed surfaces of the microphone capsule, including the diaphragms, are at ground potential. This technology makes them highly immune to electrical and atmospheric interference and contamination through microscopic dust particles.

The capsule is elastically mounted to avoid any structure borne noise that could interfere with its operation.

The frequency response of the TLM 193 amplifier is linear down to 20 Hz. Even very low bass signals are reproduced without coloration.



This implies that the microphone becomes more sensitive to subsonic frequencies, from structure borne noise or pop and wind noise.

To avoid any LF interference, we recommend to use the EA 1 elastic suspension, the PS 10 or PS 20 pop screen, or the WS 89 windscreen.

### Application Hints

- A universal cardioid mic
- Ideal for close miking of instruments with high sound pressure levels
- Announcer's mic for broadcasting/dubbing
- Home recording and project studios
- Vocalist recording
- Spot mic for
  - wind instruments
  - strings
  - percussion
  - guitar amps

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

### Delivery Range

Microphone TLM 193  
Stand mount swivel SG 1  
Wooden box

### Catalog No.

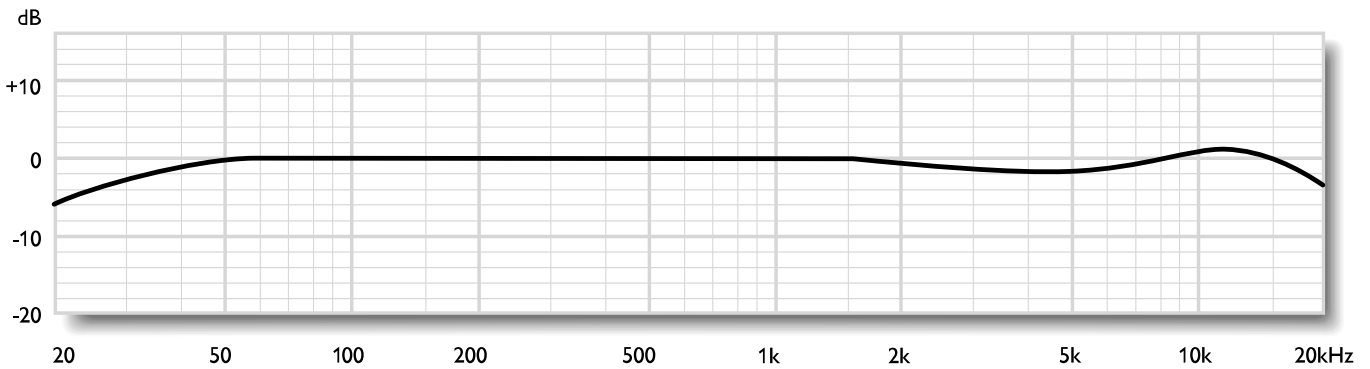
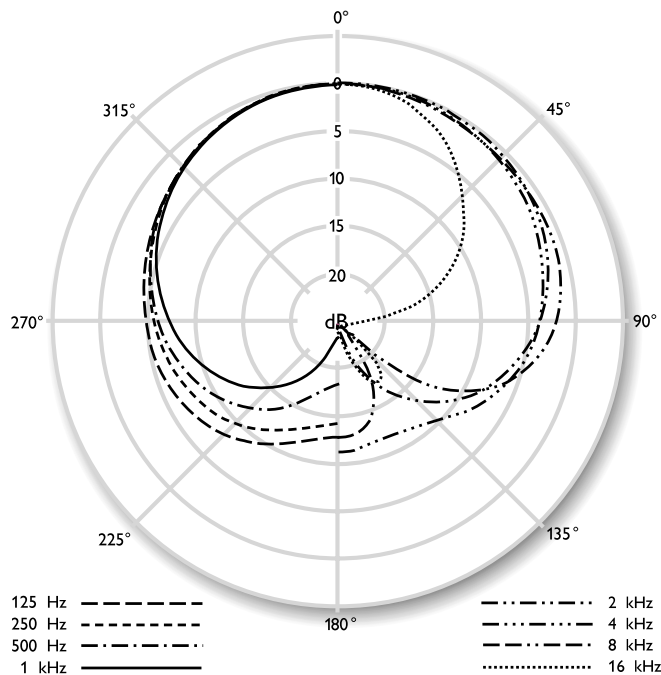
TLM 193 ..... blk ..... 08381

### Selection of Accessories

Battery supply, BS 48 i ..... blk ..... 06494  
Power supply, N 48 I-2 (230 V) ..... blk ..... 06500  
Power supply, N 48 I-2 (117 V) ..... blk ..... 06502  
Power supply, N 48 I-2  
(without plug-in mains unit) ..... blk ..... 06504  
Auditorium hanger, MNV 87 mt ..... blk ..... 06806  
Elastic suspension, EA 1 mt ..... blk ..... 08450  
Popscreen, PS 20 ..... blk ..... 07346  
Windscreen, WS 89 ..... blk ..... 07197  
Microphone cable, IC 4 mt  
(with stand mount swivel) ..... blk ..... 06557

*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 ..... 18 mV/Pa  
 Rated impedance ..... 50 ohms  
 Rated load impedance ..... 1000 ohms  
 Equivalent SPL CCIR 468-3 ..... 21 dB  
 Equivalent SPL DIN/IEC 651 ..... 10 dB-A  
 S/N ratio CCIR 468-3 ..... 73 dB  
 S/N ratio DIN/IEC 651 ..... 84 dB

Maximum SPL for THD 0.5% ..... 140 dB  
 Maximum output voltage ..... 13 dBu  
 Dynamic range of the microphone amplifier DIN/IEC 651 ..... 130 dB  
 Supply voltage ..... 48 V ± 4 V  
 Current consumption ..... 3 mA  
 Matching connector ..... XLR3F  
 Weight ..... 480 g  
 Diameter ..... 49 mm  
 Length ..... 175 mm