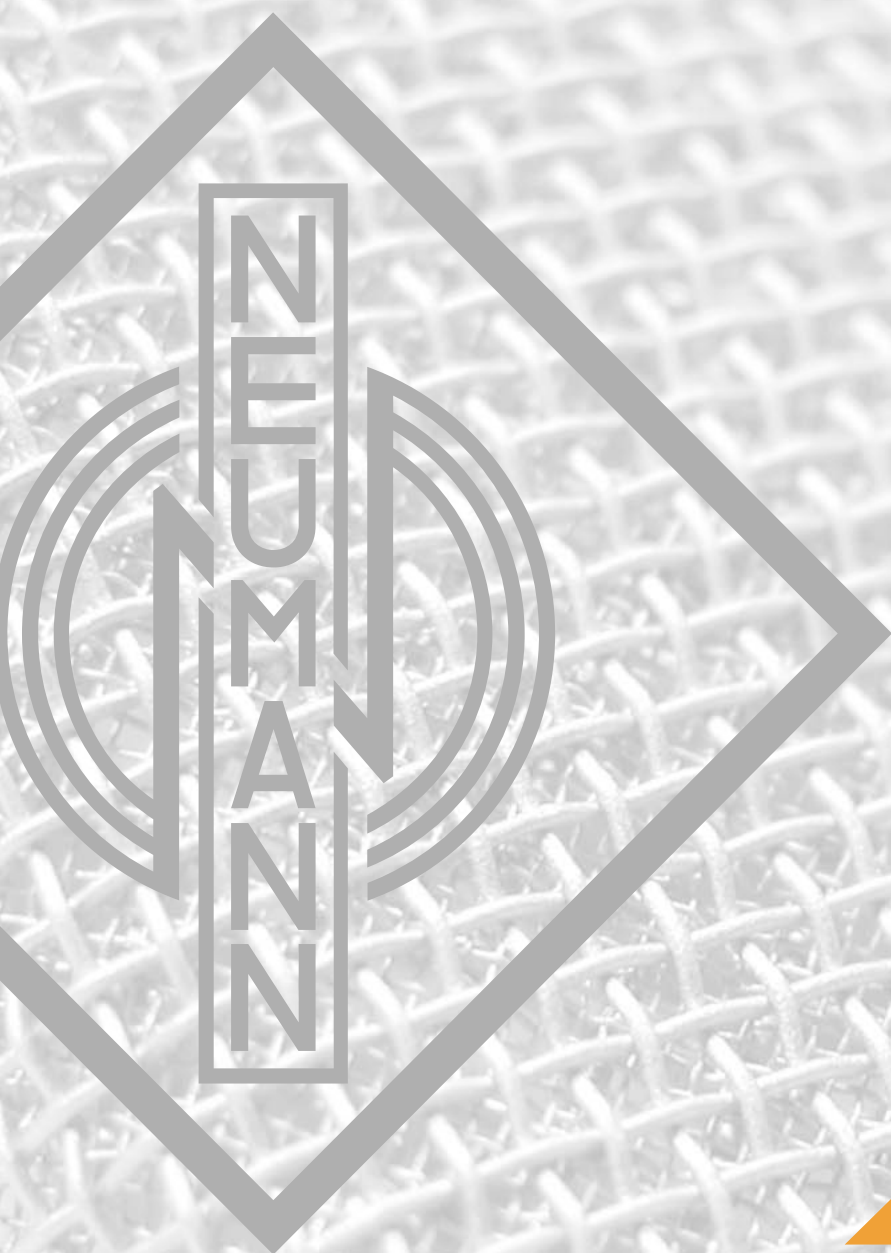


BCM 104

► **Broadcast Line**



www.neumann.com



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▶▶ THE MICROPHONE COMPANY



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

Emotion conveyed with technical perfection. This is the ideal which the Neumann microphones in the Broadcast Line have been designed to fulfill. The fine-tuning to the requirements of professional broadcast studios and the individual, functionally optimized design* ensure that these are microphones of character.

With its large-diaphragm condenser capsule and cardioid directional characteristic, the BCM 104 is ideal for the faithful reproduction of speech and music. This is due, for instance, to the frequency response that is flat up to 3 kHz and then gradually boosted in the higher frequencies. If required, internal switches can be used to compensate for the proximity effect and to reduce the sensitivity by 14 dB. The versatility of the BCM 104 can be seen in its wide range of applications, from news, to round-table discussions, to radio plays, to musical recordings.

Mechanical Features

The microphone headgrille twists off easily for quick cleaning. Neumann offers optional color-coded headgrilles so that, for reasons of hygiene, each announcer can use his or her individual headgrille. In front of the capsule, mounted on a frame holder, a fine gauze serves as a built-in popscreen.

The microphones of the Broadcast Line have an elastic mount against structure-borne noise, that is compatible with standard broadcast-segment microphone arms.

Acoustic Features

The microphone headgrille houses the K 04 large-diaphragm capsule, which has a flat frequency response up to 3 kHz. Higher frequencies have an increased presence up to 2 dB.

Since the above-mentioned microphone characteristics are obtained without the use of resonance effects, the microphone features excellent transient response and transmits all transient phenomena of music and speech without any coloration.

The integrated Pop Screen

A pop screen not only prevents the occurrence of plosive pop noises in vocal recordings, but also efficiently prevents unwanted particles, from respiratory moisture, nicotine, to food remnants, from settling on the diaphragm. The pop screen can be removed for cleaning without the use of tools.

Electrical features

Instead of a transformer to couple the microphone output to the supply voltage, the BCM 104 has an electronic circuit which, like a transformer, provides for good common mode rejection. Interference induced in the balanced modulation line is thus suppressed effectively.

With a very low self-noise of 7 dB(A), and an overload capability extending to 138 dB SPL, the BCM 104 has a dynamic range of 131 dB (A-weighted).



Filter and Preattenuation

The BCM 104 amplifier has a linear operation down to 20 Hz. An active filter efficiently suppresses signals below this frequency. In order to compensate for the proximity effect, an electronic high-pass filter, activated by a switch, is built into the microphone. This filter reduces frequencies below 100 Hz by 12 dB/octave.

A 14-dB preattenuation switch is provided in order to adjust the sensitivity, if necessary, to circuits designed for dynamic microphones. This will increase the self noise level accordingly.

Both switches are located inside the microphone housing, since they will normally be operated only once, when the broadcasting facility is set up.

Mounting

The preferred mode of operation is to suspend the microphones in the Broadcast Line from a standard studio boom arm. A thread adapter to fit different connector threads is included. In order to provide protection from structure-borne noise, both the capsule and the microphone in its mount are elastically suspended.

The optional SG 5 swivel mount allows additional angling of the microphone by ± 90 degrees.

Delivery Range

BCM 104 Microphone

Catalog No.

BCM 104 ni 08483

Selection of Accessories

Power supply, N 248 (Euro) blk 08537

Power supply, N 248 (US) blk 08538

Power supply, N 248 (UK) blk 08539

Headgrille, BCK ni 08520
(incl. Assortment of colored rings)

Swivel Mount, SG 5 08529

Popscreen, PS 15 blk 08472

Popscreen, PS 20 a blk 08488

Windscreen, WS 47 blk 06826

Microphone cable, IC 3 mt blk 06543

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

Meaning of color codes:

blk = black,

ni = nickel

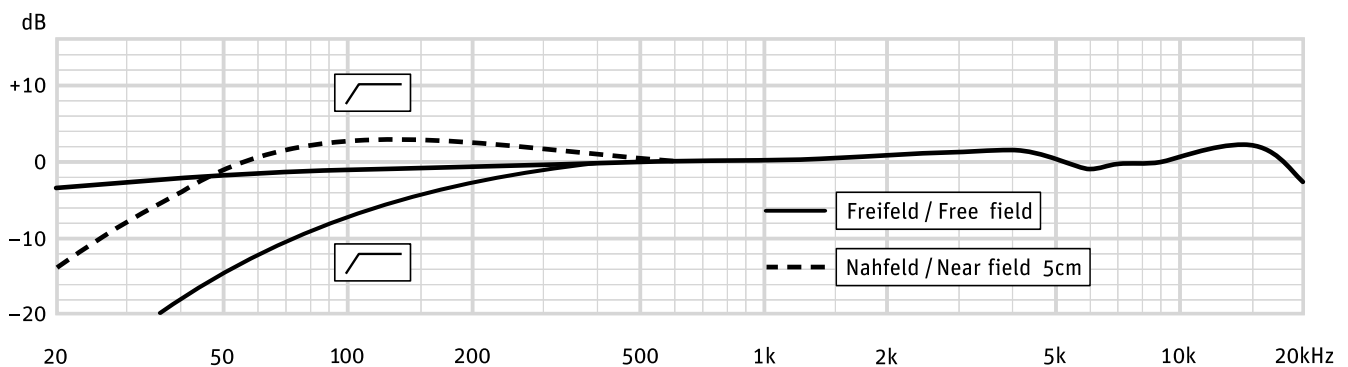
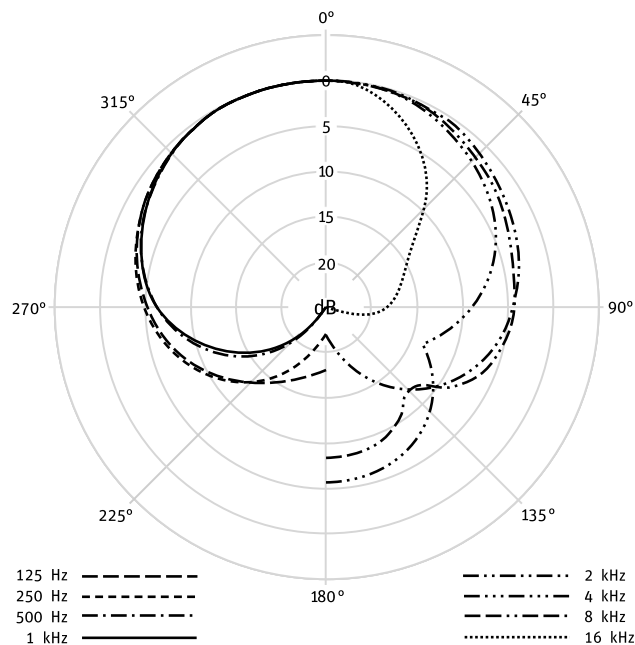
Features

- Large-diaphragm condenser capsule
- Cardioid directional characteristic
- Characteristic, functionally optimized design
- Integrated, neutral pop protection
- Integrated elastic suspension
- Individual headgrilles for different users
- Colored rings to identify the replacement headgrilles
- Easy removal and cleaning of microphone headgrille (with bayonet mount)
- Mechanical compatibility with standard studio boom arms
- Internal switches: high-pass and pre-attenuation



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measured in free-field conditions (IEC 60268-4), tolerance ± 2 dB

Technical Data

Acoustical operating principle Pressure gradient transducer
Directional pattern Cardioid
Frequency range 20 Hz...20 kHz
Sensitivity at 1 kHz into 1 kohm 22 mV/Pa
Sensitivity at -14 dB attenuation 4.4 mV/Pa
Rated impedance 50 ohms
Rated load impedance 1 kohms
Signal-to-noise ratio, CCIR¹⁾ (rel. 94 dB SPL) 76 dB
Signal-to-noise ratio, A-weighted¹⁾ (rel. 94 dB SPL) 87 dB
Equivalent noise level, CCIR¹⁾ 18 dB
Equivalent noise level, A-weighted¹⁾ 7 dB-A

Maximum SPL for THD 0.5%²⁾ 138 dB
Maximum SPL for THD 0.5% with preattenuation²⁾ 152 dB
Maximum output voltage 10 dBu
Dynamic range of the microphone amplifier (A-weighted) 131 dB
Supply voltage (P48, IEC 1938) 48 V \pm 4 V
Current consumption (P48, IEC 1938) 3.2 mA
Matching connector XLR 3 F
Weight 500 g
Diameter 64 mm
Length 85 mm
Height (without suspension) 110 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