

Product Information

BCM 104

Broadcast Line



75 Years ▶▶



The BCM 104 condenser microphone is the first product in the new Broadcast Line, which is especially tailored to the demands of professional radio announcing.

What sets the Broadcast Line apart is a completely independent, functionally optimized design derived from extensive 3D simulations.

The large-diaphragm condenser capsule used in the BCM 104 has a cardioid directional pattern with internally switchable proximity effect compensation. A second switch allows the sensitivity to be reduced by 14 dB.

The microphone headgrille twists off easily for quick cleaning. Neumann offers optional, color-coded headgrilles so that, for reasons of hygiene, each announcer working at an announcing desk can use his or her individual headgrille.

Directly in front of the capsule, mounted on a frame holder, is a piece of fine gauze that serves as a built-in popscreen.

The BCM 104 has an elastic mount against structure-borne noise, that is compatible with standard broadcast-segment microphone arms.

Acoustic Features

The microphone headgrille houses the K 104 large-diaphragm capsule, which has a flat frequency response up to 3 kHz. Higher frequencies have an increased presence of 2 dB maximum.

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 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 as usual.

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 (DIN/IEC 651).

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, a high-pass filter, electronically 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 transmission circuits designed for dynamic microphones.

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 BCM 104 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 swivel mount allows additional angling of the BCM 104 by $\pm 90^\circ$.

Features

- Cardioid microphone for broadcasting & studio
- Large-diaphragm condenser capsule with switchable proximity compensation
- Distinctive design
- Integrated pop screen
- Quick release head grille for easy cleaning
- Individual head grilles available for each user



Application Hints

- Announcer's mic for broadcasting and studio

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

Delivery Range

BCM 104

Catalog No.

BCM 104 ni 08483

Selection of Accessories

Power supply, N 48 i-2 (230 V) blk 06500

Power supply, N 48 i-2 (117 V) blk 06502

Replacement Headgrille, BCK ni 08520

Swivel Mount, SG 5 *) 08529

Popscreen, PS 15 blk 08472

Popscreen, PS 20 a blk 08488

Windscreen, WS 47 blk 06826

Windscreen, WS 87 blk 06753

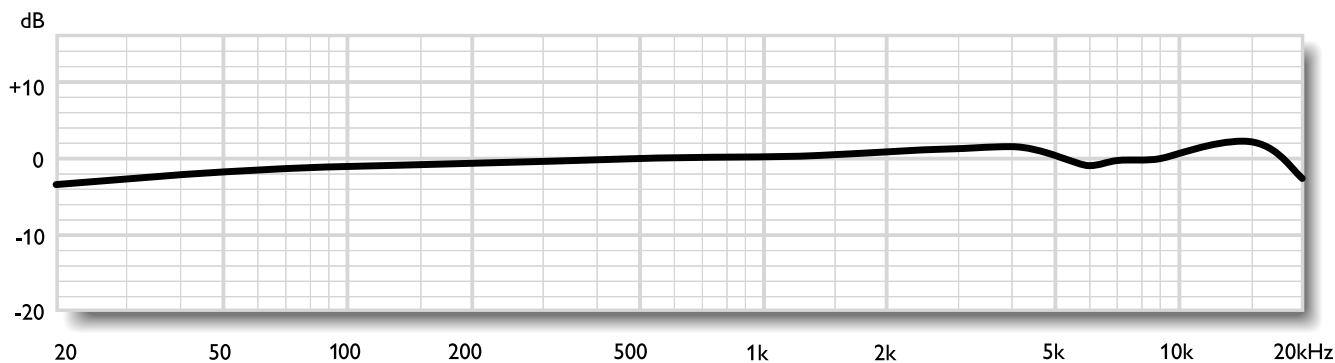
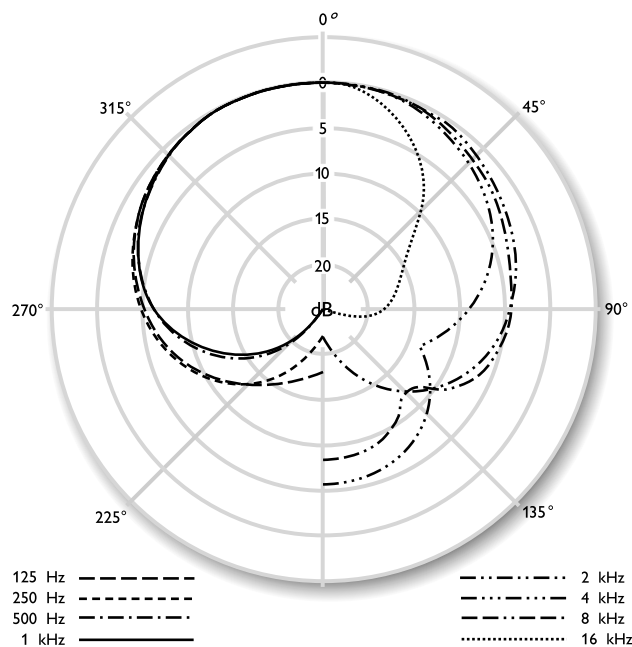
Microphone cable, IC 3 mt blk 06543

*) available in the 4th quarter of 2003

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

Meaning of color codes:

blk = black,
ni = nickel



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

Technical Data

Acoustical operating principle Pressure gradient transducer
 Directional pattern Cardioid
 Frequency range 20 Hz...20 kHz
 Sensitivity at 1 kHz into 1 kohm 24 mV/Pa
 -14 dB attenuation 4.8 mV/Pa
 Rated impedance 50 ohms
 Rated load impedance 1000 ohms
 Equivalent SPL CCIR 468-3 18 dB
 Equivalent SPL DIN/IEC 651 7 dB-A
 S/N ratio CCIR 468-3 76 dB
 S/N ratio DIN/IEC 651 87 dB

Maximum SPL for THD 0.5% 138 dB
 Maximum SPL for THD 0.5% with preattenuation 152 dB
 Maximum output voltage 10 dBu
 Dynamic range of the microphone amplifier DIN/IEC 651 131 dB
 Supply voltage 48 V $\pm$ 4 V
 Current consumption 3.2 mA
 Matching connector XLR 3 F
 Weight 500 g
 Diameter 64 mm
 Length 85 mm