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Home » Neumann » Neumann BCM 705 Dynamic Studio Microphone Operating Manual

Neumann BCM 705 Dynamic Studio Microphone Operating Manual

Contents

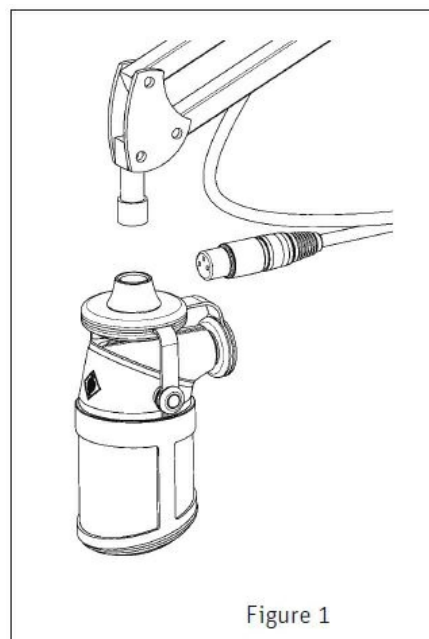**Neumann BCM 705 Dynamic Studio Microphone**

Brief Description

- The BCM 705 microphone is a dynamic studio microphone with a hypercardioid directional characteristic.
- The BCM 705 is specially designed for speech reproduction at close range and thus features an integrated pop screen and a frequency response that compensates for the overemphasis of the bass arising from the proximity effect.
- The head grille and pop screen can be removed without the use of tools, permitting easy cleaning or replacement.
- The 3-pin XLR connector has the following pin assignments:
  - **Pin 1:** 0 V/ground
  - **Pin 2:** Modulation (+phase),
  - **Pin 3:** Modulation (−phase).
- The output sensitivity is 1.7 mV/Pa = −55.4 dBV re. 1V/Pa. The microphone does not require a power supply.
- The BCM 705 is addressed from the front; the front of the microphone is designated by the Neumann logo.
- The preferred mode of operation is to suspend the BCM 705 from a standard studio boom arm. The amount provided for this purpose has an integrated elastic suspension in order to isolate the microphone from structure-borne noise. A thread adapter to fi t different connector threads is included.

The BCM 705 Broadcast Microphone

- The BCM 705 is a dynamic microphone in the Broad-cast line, with a hypercardioid directional characteristic.
- The abbreviation "BCM" stands for "Broadcast Microphone".
- The BCM 705 is addressed from the front; the front of the microphone is designated by the Neumann logo.
- The bass frequency response is designed to compensate for the overemphasis of the bass caused by the proximity effect.
- Both the capsule and the microphone are elastically suspended in order to provide protection from structure-borne noise. The microphone is designed so that it can be suspended from most standard microphone boom arms (**see Fig. 1**). An adapter is supplied to permit attachment to different threaded connectors.

Figure 1

Microphone Versions and Output Wiring

- **BCM 705 ………….. ni ………….. Cat. No. 008507**
  The BCM 705 microphone has a satin nickel finish and a male 3-pin XLR connector insert. The microphone pin assignments comply with IEC 268-11.
- The modulation is connected to pins 2 and 3; the shield is connected to pin 1. A sudden increase in sound pressure in front of the microphone diaphragm causes a positive voltage to appear at pin 2.

Microphone Cables

Neumann offers a wide range of cables; a selection is presented here. Other cable lengths and cable materials without connectors are available upon request.

The following cables are available for the BCM 705 microphone:

- **IC 3 mt ……………. blk ………… Cat. No. 006543**
  Microphone cable with a double twist (double helix) braiding as a shield. Ø 5 mm, length 10 m. XLR 3 connectors, matte black.
- **AC 25 (0.3 m) ……………………. Cat. No. 006600**
  Adapter cable with XLR 3 M connector and unbalanced 6.3 mm mono jack. It is used to connect 3-pin XLR outputs of power supplies to units with a 6.3 mm mono jack input. Designed for all microphones, excluding KM 100 System and GFM 132.

Technical Specifications

- **Acoustical op. principle** ………….Pressure gradient transducer
- **Directional pattern** ……………………Hypercardioid
- **Frequency range .**………………….…..20 Hz…20 kHz
- **Sensitivity 1)** ………… 1.7 mV/Pa = –55.4 dB ± 1 dB
- **Rated impedance** ……………………………200 ohms
- **Rated load impedance** …………………….. 10 ohms
- **S/N ratio**
  CCIR 468-3 ………………………………………62 dB
- **S/N ratio**
  DIN/IEC 651 ……………………………………..76 dB
- **Equivalent SPL**
  CCIR 468-3 ……………………………………… 32 dB
- **Equivalent SPL**
  DIN/IEC 651 ……………………………………18 dB-A
- **Weight** ……………………………………………… 500 g
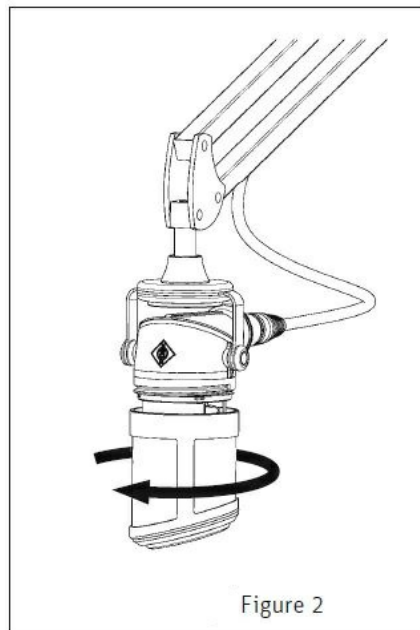- **Diameter** ……………………………………….64 mm
- **Length** …………………………………………85 mm
- **Height (without suspension)** ………………. 110 mm

1 Pa = 10 µbar

0 dB 20 µPa
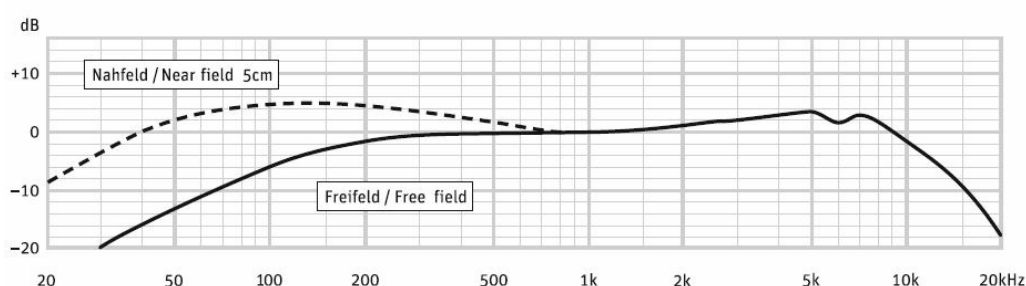
- at 1 kHz into 10 kohm rated load impedance. 1 Pa 94 dB SPL.

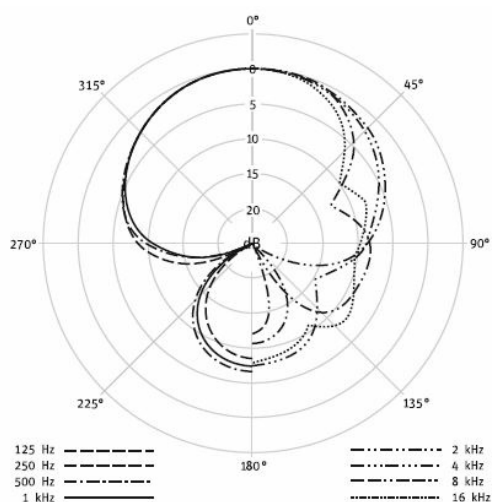**Hints on Maintenance of the Microphone, Headgrille, and Pop Screen**

Figure 2

- Do not operate the microphone without the head grille and pop screen! Operation without the head grille or without the pop screen could damage the sensitive capsule. Moreover, the acoustic properties of the microphone are attuned to the combined effects of the capsule, pop screen, and head grille.
- For cleaning, the head grille with the pop screen can be unscrewed from the microphone housing without the use of tools. Cleaning is best done using lukewarm water with a little detergent. In the case of soiling which is difficult to remove, the head grille may be scrubbed gently with a brush.
- After washing, rinse the head grille thoroughly with clean water and allow it to air dry, or dry the head grille with a cloth. Under no circumstances should a blow drier or heat be used. When placing the foam into the head grille the ends should be behind the sidebar. After cleaning, screw the dry head grille back onto the microphone housing, until it can be clearly heard meeting the stop.
- **Attention:** The head grille and the pop screen must be completely dry before being reassembled on the microphone. Humidity can lead to malfunctions and can cause damage to the capsule.
- Headgrilles are available separately as accessories; please see the Accessory section. Each user can thus operate the microphone using his or her own individual head grille.

Frequency Responses and Polar Pattern

measured in free-field conditions (IEC 60268-4) into 10 kohm rated load impedance

Accessories

- **Stand Mounts**

  SG 5 ………………………………………… 008529

  Swivel mount for BCM 104 and other microphones. On the microphone side, it has a 3/8″ male thread, on the stand side is a 5/8″-27 female thread. A threaded adapter for the connection to 1/2″ and 3/8″ studies included.

- **Replacement Headgrille**

  BCK …………………… ni ………….. Cat. No. 008520

  Replacement Head Grille for the BCM 104. It comes with 5 rings of different colors. Additional head grilles enable each microphone user at the broadcasting facility to operate the microphone using his or her own individual head grille. This ensures improved hygiene and a more comfortable working environment at the studio.

- **Popscreen**

  Pop screens provide excellent suppression of so-called pop noise. They consist of a round, thin frame covered with black gauze on both sides. A gooseneck of about 30 cm (12″) in length is mounted at the popshield. It will be attached to microphone stands by means of a clamp with a knurled screw.

  PS 15 ………………. blk ………… Cat. No. 008472 The frame is 15 cm in diameter.

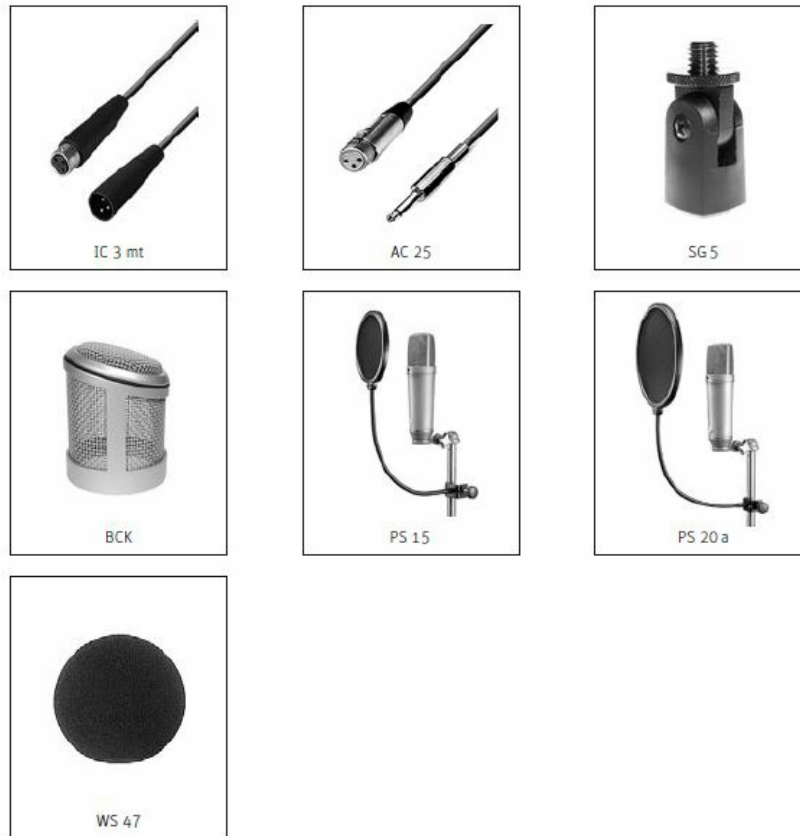 **PS 20 a ……………. blk ………… Cat. No. 008488** The frame is 20 cm in diameter.

- **Windshields**

  To protect against noise caused by wind, close talking, and rapid movement on a boom, open-cell polyurethane foam windshields are available. These windshields have no disturbing resonances and do not affect the microphone's directional characteristics. The frequency response is only slightly attenuated in the higher frequency range.

  WS 47 ………………. blk ………… Cat. No. 006826

  Windscreen for D-01. The diameter is approx. 120 mm. Suppression of the wind noise approx. 22 dB. Attenuation at 15 kHz approx. 3 dB. Color black.

Further articles are described in the catalog "Accessories".

IC 3 mt

AC 25

SG 5

BCK

PS 15

PS 20 a

WS 47

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FREQUENTLY ASKED QUESTIONS

What is the Neumann BCM 705 Dynamic Studio Microphone?

The Neumann BCM 705 is a high-quality dynamic studio microphone designed for professional audio recording applications, known for its exceptional audio performance and versatility.

What are the key features of the Neumann BCM 705 microphone?

The Neumann BCM 705 microphone typically features a supercardioid pickup pattern, a dynamic transducer, low self-noise, and a wide frequency response, making it ideal for studio vocals, instruments, and broadcasting.

Is the Neumann BCM 705 suitable for studio vocals?

Yes, the Neumann BCM 705 is often used for studio vocals, providing clear and detailed sound reproduction, making it a top choice for professional singers and voice-over artists.

Can I use it for instrument recording?

Absolutely, the Neumann BCM 705 is versatile for instrument recording, capturing various instruments with exceptional clarity and precision.

Does the Neumann BCM 705 microphone require additional audio interfaces or drivers?

No, the Neumann BCM 705 is typically a plug-and-play microphone and does not require additional audio interfaces or drivers; simply connect it to your recording device and start recording.

Is there a headphone monitoring feature?

No, the Neumann BCM 705 microphone itself does not include a headphone monitoring feature. You would need a separate audio interface or mixer with headphone monitoring capabilities for this.

What is the frequency response of the Neumann BCM 705 microphone?

The microphone typically has a frequency response of 9 KHz, capturing a wide range of audio frequencies with exceptional accuracy.

Is there an adjustable gain control on the microphone?

No, the Neumann BCM 705 microphone does not typically have an adjustable gain control. Gain control is usually handled by the connected audio interface or mixer.

What is the weight and dimensions of the Neumann BCM 705 microphone?

The 1.8 Pounds weight and 8.8 x 4.8 x 4.7 inches dimensions of the microphone.

Is it suitable for live broadcasting?

Yes, the Neumann BCM 705 microphone is suitable for live broadcasting applications, providing professional-

grade audio quality for live radio and television broadcasts.

Can I use it with recording software and DAWs?

Yes, the Neumann BCM 705 is compatible with various recording software and digital audio workstations (DAWs) on both Windows and Mac platforms, provided you have the necessary audio interface and setup.

Is there a carrying case included for transport and storage?

The Neumann BCM 705 microphone package may include a protective carrying case for convenient transport and safe storage.

What type of connector does it use?

The Neumann BCM 705 typically uses an XLR connector, which is a common standard for professional microphones and audio equipment.

Is there a warranty for the Neumann BCM 705 Dynamic Studio Microphone?

Neumann often provides a limited warranty for the BCM 705 Dynamic Studio Microphone; warranties often range from 6 months tu 1 year or more.

Where can I purchase the Neumann BCM 705 Dynamic Studio Microphone?

You can typically purchase the Neumann BCM 705 Dynamic Studio Microphone from authorized Neumann dealers, professional audio stores, or reputable online marketplaces to ensure you receive genuine products.

Is it suitable for professional studio applications?

Yes, the Neumann BCM 705 Dynamic Studio Microphone is often chosen for professional studio applications and delivers exceptional audio quality for demanding recording tasks.

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