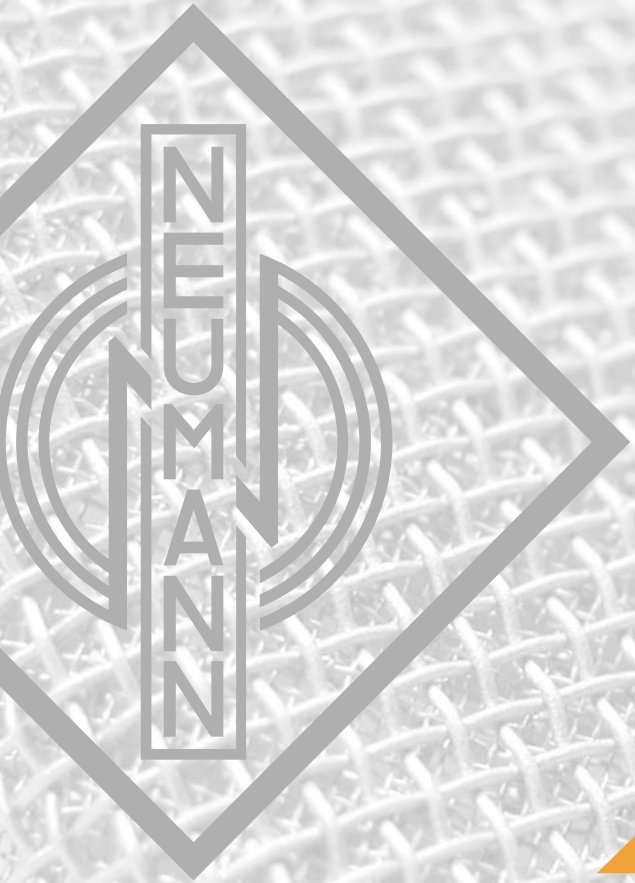
Product Information

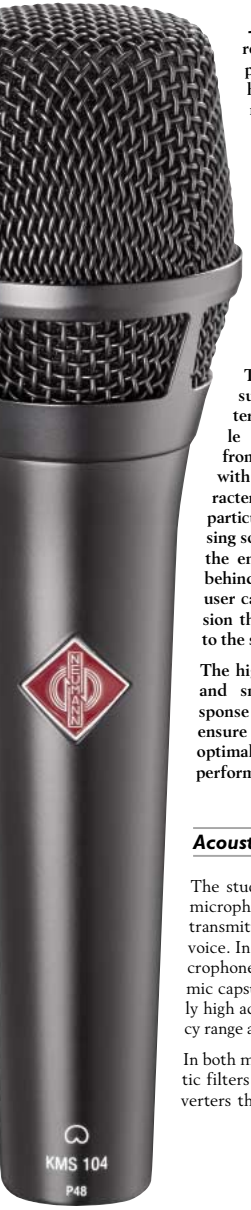
KMS 104/105

Vocalist Microphones



www.neumann.com

Georg Neumann GmbH • Ollenhauerstr. 98 • 13403 Berlin • Germany • Tel.: +49 (30) 41 77 24-0 • Fax: +49 (30) 41 77 24-50
E-Mail: headoffice@neumann.com, engineering@neumann.com, catalog-info@neumann.com • Web: www.neumann.com



The KMS 104 and KMS 105 microphones have been developed to permit optimal transmission of the human voice, and are thus microphones of choice for demanding live applications. The KMS 105, which has already been available on the market for some time, has become an internationally recognized standard in the field of high-quality stage microphones.

Due to their low self-noise and crosstalk behavior which is free of coloration, both microphones are ideal for use with in-ear monitoring systems.

The KMS 104 has a microphone capsule with a cardioid directional characteristic which provides the best possible suppression of sounds originating from behind the microphone. In contrast, with its supercardioid characteristic the KMS 105 is particularly good at suppressing sounds originating from the entire 180° hemisphere behind the microphone. The user can thus select the version that is optimally suited to the specific application.

The high acoustic resolution and smooth frequency response of the microphones ensure that the musician has optimal control of the stage performance at all times.

Acoustic features

The studio condenser capsules used in both microphone versions provide the basis for transmitting all the nuances of the human voice. In comparison with other handheld microphones, which operate mostly with dynamic capsules, the KMS series has a particularly high acoustic transparency, a wide frequency range and a fine resolution of transients.

In both microphones, carefully adjusted acoustic filters and transformerless impedance converters that can handle very high sound pressure levels prevent the microphones from being overloaded even by strong plosive sounds.

In spite of excellent pop protection, sibilants and "S" sounds are transmitted with their natural accentuation, as is possible only with condenser microphones. Furthermore, the above-mentioned acoustic filters are designed so that the distinctive directional characteristics of the capsules are preserved even in the bass range. The filters thus ensure a very high level of feedback protection for the KMS 104 and KMS 105 vocalist microphones when they are used with a stage sound system.

Electrical features

Since vocalist microphones are typically addressed at close range, for the bass frequency response of the microphones, electronic compensation is used for the proximity effect in the respective capsules.

In addition, each microphone has an invariable, built-in high-pass filter with a cutoff frequency of 120 Hz (–3 dB, measured in a free sound field). The dynamic range of the KMS 104/105 is 132 dB, and the maximum sound pressure level is 150 dB.

The low self-noise level of only 18 dB-A permits both microphones to be used at high gain levels without the risk of additional noise. Even at large distances, the microphones thus operate with a high signal-to-noise ratio, facilitating the freedom of movement and creativity that are important to the artist.

Due to the transformerless output circuit, the microphone signals can be transmitted even through long cables without loss of sound.

Mechanical features

Microphones designed for use on stage require a particularly robust construction. The KMS 104 and KMS 105 therefore have thick-walled metal housings, which also provide effective protection against handling noise.

The microphone headgrilles are made of hardened steel. If required, they can easily be unscrewed to permit cleaning of the interior acoustic filters.

Delivery Range

The KMS 104 and KMS 105 microphones, with a matching stand clamp, are supplied in an attractive padded nylon bag that is sufficiently durable for touring.

Features

- *Neumann sound on stage*
- *Excellent transparency for vocals/speech*
- *Cardioid/Supercardioid polar pattern with excellent feedback rejection*
- *Without off-axis coloration*
- *Transformerless output*
- *Effective pop shielding without any side effects*
- *Set includes stand clamp*

Application Hints

- *Vocals and speech on stage*
- *Announcer's mic for broadcasting/dubbing*
- *Especially suited for in-ear-monitoring*
- *For feedback-prone environment*

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

Delivery Range

KMS 104/105 Microphone
SG 105 Stand clamp
Padded nylon bag

Catalog No.

KMS 104	*ni*	*08548*
KMS 104 bk	*blk*	*08549*
KMS 105	*ni*	*08454*
KMS 105 bk	*blk*	*08455*

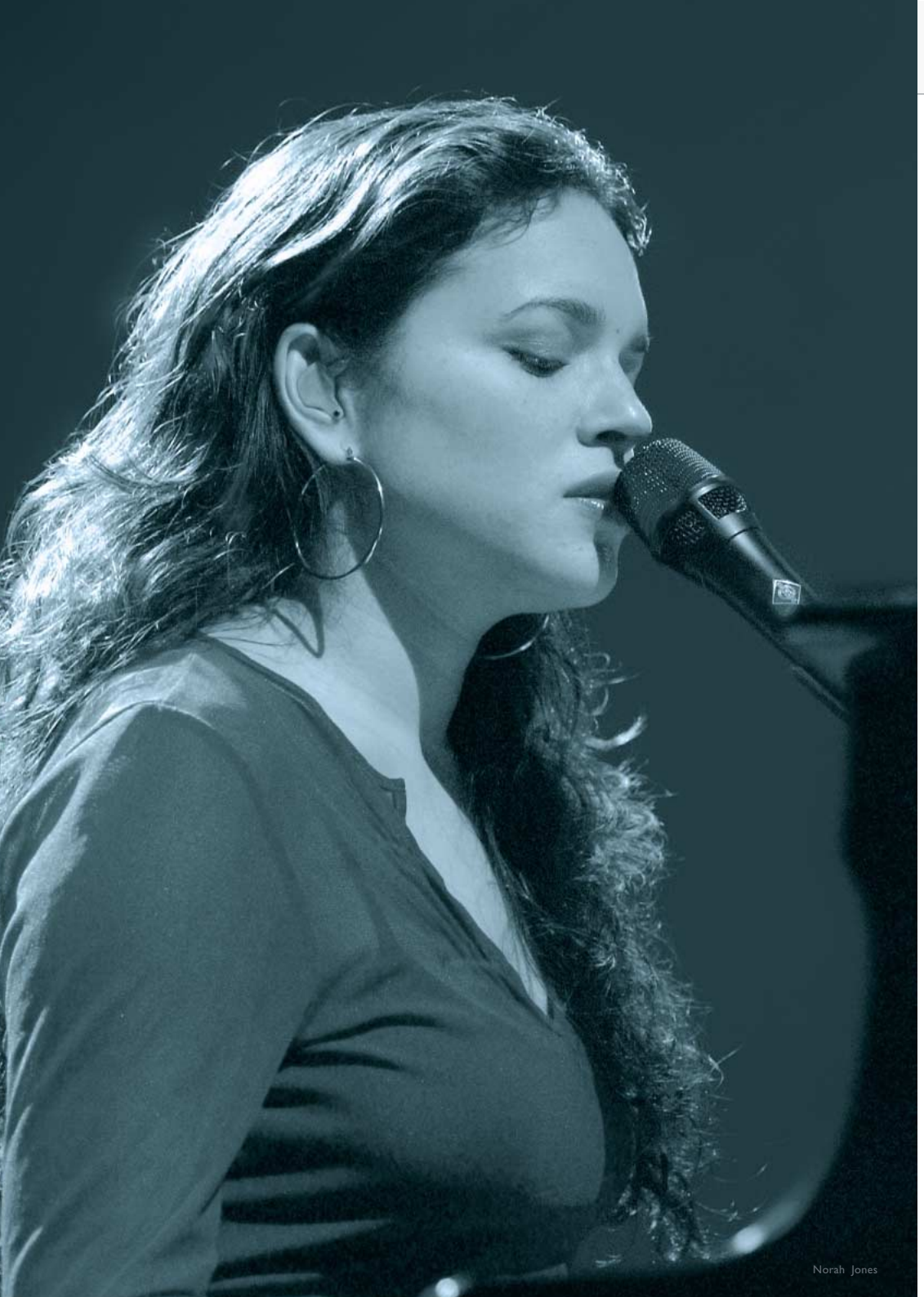
Selection of Accessories

Battery supply, BS 48 i	*blk*	*06494*
Battery supply, BS 48 i-2	*blk*	*06496*
Power supply, N 248 (Euro)	*blk*	*08537*
Power supply, N 248 (US)	*blk*	*08538*
Power supply, N 248 (UK)	*blk*	*08539*
Microphone cable, IC 3 mt	*blk*	*06543*
Adapter cable, AC 25	*blk*	*06600*
Adapter cable, AC 27	*blk*	*06602*
Table stand, MF 3	*blk*	*07321*
Windscreen, WSS 100	*blk*	*07352*
Stand clamp, SG 105	*blk*	*08460*

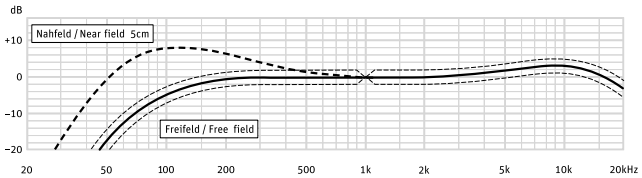
(included in the supply schedule)

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

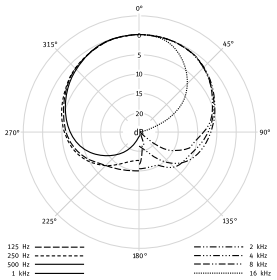
Meaning of color codes: blk = black, ni = nickel



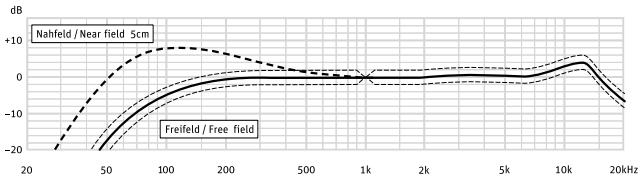
KMS 104

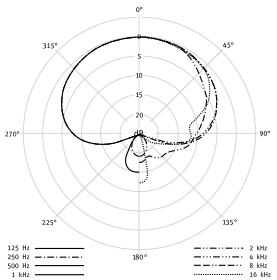


measured in free-field conditions (IEC 60268-4)



KMS 105





Technical Data

Acoustical operating principle	Pressure gradient transducer
Directional pattern	cardioid/supercardioid
Frequency range	20 Hz...20 kHz
Sensitivity at 1 kHz into 1 kohm	4.5 mV/Pa
Rated impedance	50 ohms
Rated load impedance	1000 ohms
Signal-to-noise ratio, CCIR[1] (rel. 94 dB SPL)	66 dB
Signal-to-noise ratio, A-weighted[1] (rel. 94 dB SPL)	76 dB
Equivalent noise level, CCIR[1]	28 dB
Equivalent noise level, A-weighted[1]	18 dB-A
Maximum SPL for THD 0.5%[2]	150 dB
Maximum output voltage	12 dBu
Dynamic range of the mic. amplifier (A-weighted)	132 dB
Supply voltage (P48, IEC 1938)	48 V ± 4 V
Current consumption (P48, IEC 1938)	3.5 mA
Matching connector	XLR3F
Weight	approx. 300 g
Diameter	48 mm
Length	180 mm

[1] according to IEC 60268-1; CCIR-weighting acccording to CCIR 468-3, quasi peak; A-weighting according to IEC 61672-1, RMS [2] measured as equivalent el. input signal

Selection of Accessories

IC 3 mt, Microphone cable

AC 25, Adapter cable

WSS 100, Windscreen

BS 48 i, Battery supply

N 248, Power supply

Irrtümer und technische Änderungen vorbehalten • Errors excepted, subject to changes • Printed in Germany • Publ. 03/06 517070