

MKH 20 P 48

Bedienungsanleitung
Instructions for use
Notice d'emploi
Istruzioni per l'uso
Instrucciones para el uso



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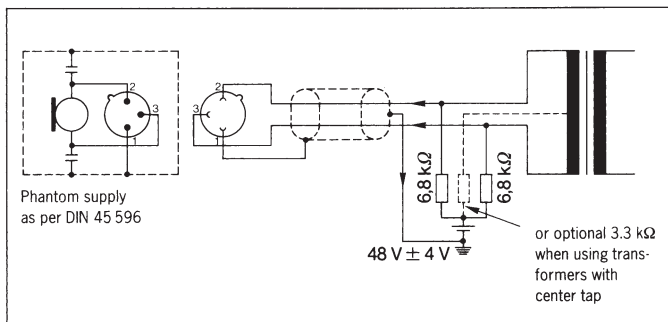
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Brief Description

The MKH 20 P 48 is a high-frequency condenser microphone with omnidirectional characteristics. Its features include:

- Very low noise level, making possible high-dynamic recordings
- Undistorted transmission of sound pressure up to 142 dB
- Frequency response range 20 to 20 000 Hz
- Electrically balanced output
- Defeatable diffuse-field equalization for recordings outside the reverberation radius
- Pad switch (-10 dB attenuation)

Putting into service



Power supply and connections

The MKH 20 P 48 is designed for use with a phantom power supply between 44 and 52 V, as prescribed in DIN 45 596.

Plug: 3-pole XLR

Wiring: balanced

Impedance: 150 Ω

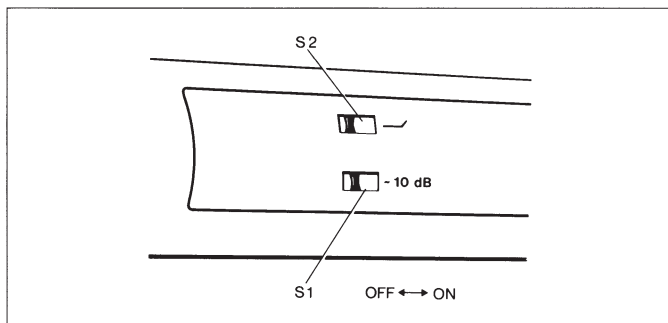
Min terminating impedance:

600 Ω up to 130 dB SPL

1000 Ω as of 130 dB SPL

See page 18 for powering and connection possibilities.

Note: Extension cables should if possible be inserted between the power supply unit and the audio recorder or mixer. Total cable length should not exceed 200 m. At greater lengths the cable capacitance will affect microphone frequency response at the upper end of the response range.



Setting the pre-attenuation and the diffuse-field equalization

Pre-attenuation **S 1**

Pad switch **S 1** is used to attenuate microphone sensitivity by 10 dB. This feature should be used only when the microphone input at downline equipment is not designed to handle the high microphone output voltages generated at high sound pressure levels (which would result in distortion).

Diffuse-field equalization **S 2**

The MKH 20 P 48 is equipped with a diffuse-field equalization circuit to compensate for the acoustics of the recording environment; it is activated with switch **S 2**.

Diffuse-field equalization compensates for the moderate increase in directivity which the microphone will exhibit at higher frequencies and should be switched on when making recordings outside the so-called reverberation radius (i.e. microphone beyond the point where the level of the reflected sound is higher than the level for the direct sound). This feature should be switched off where the share of direct sound will predominate, since the high frequencies would otherwise be over-emphasized. With the switch in this latter position, the microphone will exhibit a linear response curve for sound impinging from the front.

The effect of the equalization circuit on frequency response is shown on page 16.

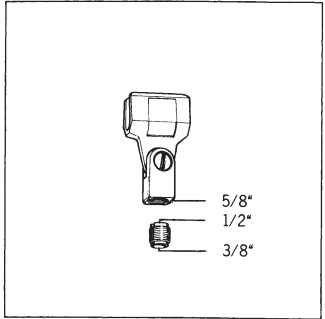
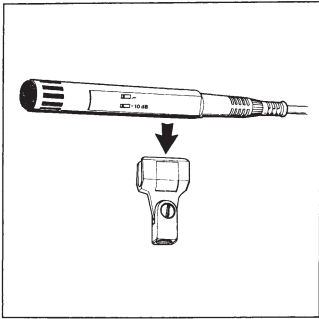
Diffuse field



Direct Sound



Mounting the microphone



The stand socket is equipped with a threaded, interchangeable insert to adapt to stands with 3/8", 1/2" or 5/8" threads.

Technical data

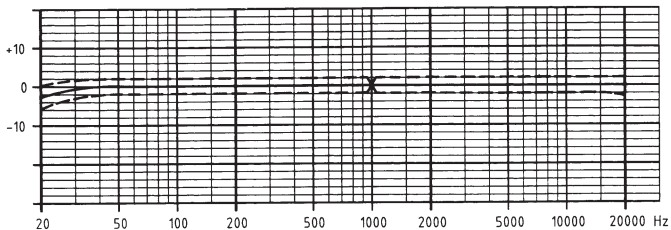
Acoustic principle	pressure transducer
Directional characteristics.....	omnidirectional
Frequency response range	20 to 20.000 Hz
Free-field, no-load transmission factor at 1 kHz	25 mV/Pa (8 mV/Pa) \cong -32 dBV (-42 dBV)
Equivalent sound pressure level	
as per DIN 45 500, curve A	10 dB (18 dB)
as per DIN 45 405/CCIR 468	20 dB (28 dB)
Max. sound pressure level.....	134 dB (142 dB)
Output.....	balanced
Nominal impedance.....	150 Ω
Min. terminating impedance.....	1000 Ω
Pre-attenuation	10 dB, defeatable
Diffuse-field equalization	defeatable
Subsonic damping	18 dB/oct below 20 Hz
Power supply	phantom supply as per DIN 45 596
Supply voltage.....	44 to 52 V
Supply current.....	2 mA
Dimensions (mm)	25 \varnothing x 150
Weight.....	100 g
Standard equipment	one MKH 20 P 48 microphone one MZQ 40 stand adapter one MZW 41 windscreen

Values in brackets with pad switch in position -10 dB

We reserve the right to alter specifications, in particular with regard to technical improvements.

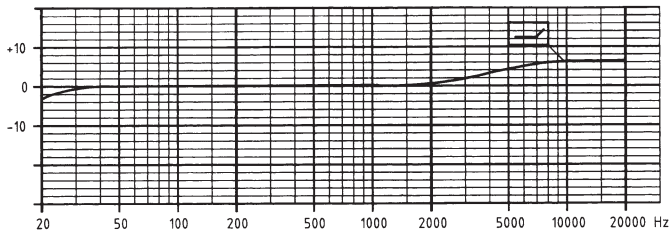
Frequency response

dB

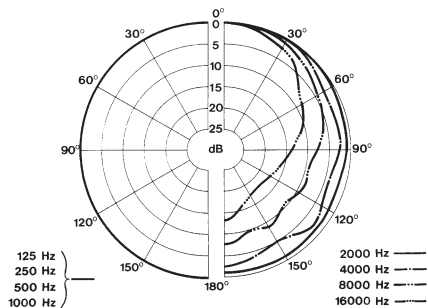


Effect of the diffuse-field equalization circuit

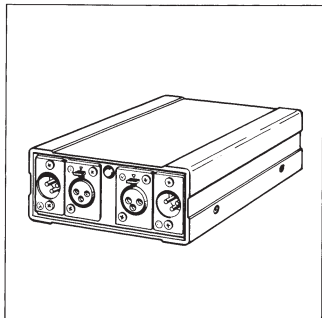
dB



Polar diagram



Recommended accessories



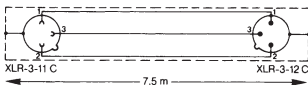
MZN 16 P 48 U power supply

(Art.No. 1241)

Power supply for 48 V phantom supply (DIN 45 596). Allows simultaneous supply of two microphones. Required line voltage: 95 to 265 V/50 – 60 Hz.

KA 7 U connector cable

(Art.No. 1777)

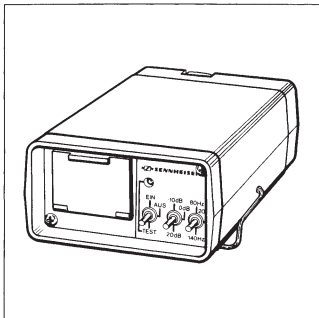


Three-conductor, shielded cable; 7.5 m long.

Suspension MZS 40

(Art.No. 03017)

Features high damping of structure-borne noise.



Battery-powered supply adapter

MZA 14 P 48 U

(Art.No. 2034)

Adapter to supply a MKH 20 P 48 microphone, independent of a line power source converter which boosts the voltage. The MZA 14 P 48 U contains a voltage of a 9 V battery to 48 V. Battery life: approx. 25 hours. Output suitable for connection to balanced and unbalanced microphone inputs. Special features: defeatable 10 dB pre-attenuation; switchable low-cut filter. Dimensions: 140 x 46 x 76 mm.

Stand holder MZQ 31

(Part. No. 35972)

Enables microphone adjustment in any direction.

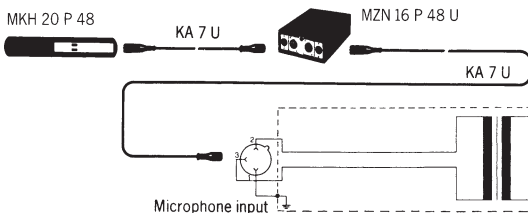
Twin clip MZD 30

(Art.No. 02990)

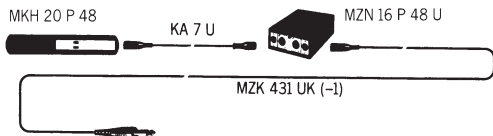
For mechanical connection of a MKH 30 with MKH 20 or MKH 40 when used for MS-stereo recordings (Blumlein configuration).

Powering and connection possibilities

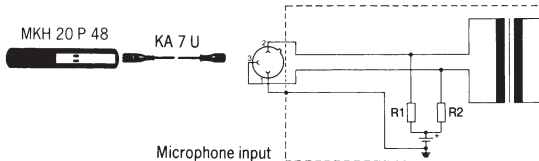
Connecting to balanced, groundfree microphone inputs



Connecting to unbalanced microphone inputs



Connecting to mixers and audio recording decks with phantom voltage supply



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