

SEIT 1928

KONDENSATORMIKROFONE
FÜR STUDIO - UND MESSTECHNIK

MICROTECH GEFELL



UM 900

TUBE CONDENSER MICROPHONE

with
phantom powering

48 V

Large diameter dual diaphragm capsule, switchable

○ ○ ∩ ⊕ 8

Balanced output transformer

Level reduction pad 10 dB

Level increase gain 4 dB

Bass roll-off switch

Satin nickel finish

Dark bronze finish



Auszeichnung

Thüringer Preis für Produktdesign 1998

MICROPHONE

The UM 900 is the first switchable pattern, tube condenser microphone that can be connected to industry standard 48 Volt phantom powering using a regular 3-pin XLR-microphone cable. This is made possible by an advanced circuit design for the amplifier and internal power supply. The pickup capsule uses a traditional, proven design with two large, gold plated plastic diaphragms.

Three switches are located around the body of the UM 900. The switch in the front selects the polar pattern: omni, wide cardioid, cardioid, hyper cardioid and figure 8. Located 120 degrees to each side are switches for gain adjust and low frequency roll-off.

The unusual shape of the microphone's body is especially designed to minimize undesirable sound reflections toward the pickup element.

Acoustic influences that could result from the housing resonance and/or mechanical vibration are reduced by the robust construction and by a special fixture within the microphone's housing that dampens vibration.

FIXTURE

UM 900 shown with optional elastic suspension EA 92.



The UM 900 shown with its integrated elastic suspension can be swiveled 135 degrees to both sides.

UM 900 shown with optional swivel mount MH 80.



APPLICATION

The high sensitivity and low noise of the UM 900 make it especially suitable for vocal and speech pickup in professional sound recording studios, scoring stages and broadcast studios. The 5 pickup patterns allow the microphone to be used for a wide variety of applications. E.g. the microphone can be used as an overall pickup for a large orchestra or as a solo or spot mike for individual instruments. It can also be used as an announcers microphone where its proximity effect is desirable.

ACOUSTICAL FEATURES

The direction of maximum sensitivity is radial to the microphone body, i.e. side addressed. The front of the microphone is indicated by the model number and the pattern selector switch.

The pick-up capsule is mounted in a large, acoustically open headgrill that prevents mechanical vibration interference.

This gives the microphone a clean, colourless sound characteristic.

ELECTRICAL FEATURES

The internal vacuum tube amplifier of the UM 900 can be powered by any external 48 Volt phantom supply that can provide at least 4 mA of current.

The amplifier uses a specially selected vacuum tube.

An internal transverter provides all the necessary voltages.

The low impedance output is implemented with an operational amplifier and balanced output transformer.

The UM 900 can be connected with cables up to 150 m length without any effects on sound quality.

SWITCHING FUNCTIONS



All switches can be turned continuously left or right without stops.

POLAR PATTERNS

The microphone features 5 pickup patterns: omni, wide cardioid, cardioid, hyper cardioid, figure 8.



LEVEL ADJUSTMENT

3 positions can be selected.

NOTE: When the "+4 position" is selected the pattern switch on the front of the microphone is disabled. Only the cardioid pattern works at the higher sensitivity of +4 dB.



REDUCED BASS ROLL-OFF

2 positions can be selected.

The sensitivity at 70 Hz is reduced by 10 dB in the position 



DELIVERY

Tube Condenser Microphone **UM 900** in wooden case, L x B x H 250 x 175 x 110 mm
48 V Phantom

satin nickel

Order-No. 211145

dark bronze

Order-No. 211146

Tube Condenser Microphone **UM 900** in wooden case, L x B x H 250 x 175 x 110 mm
48 V Phantom **with swivel mount MH 80**

satin nickel

Order-No. 211152

dark bronze

Order-No. 211153

Tube Condenser Microphone **UM 900** in wooden case, L x B x H 250 x 175 x 110 mm
48 V Phantom **with elastic suspension EA 92**

satin nickel

Order-No. 211147

dark bronze

Order-No. 211148

UM 900, satin nickel



UM 900 with MH 80, satin nickel



SPECIAL EDITION

Tube Condenser Microphone UM 900, 24 Karat gold

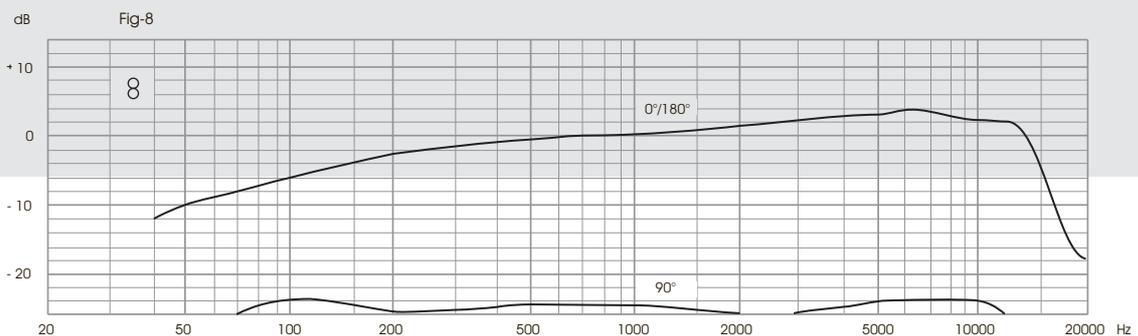
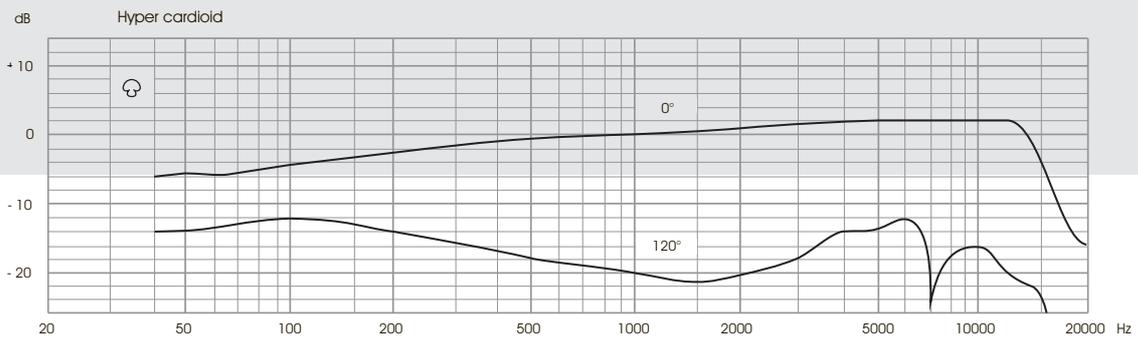
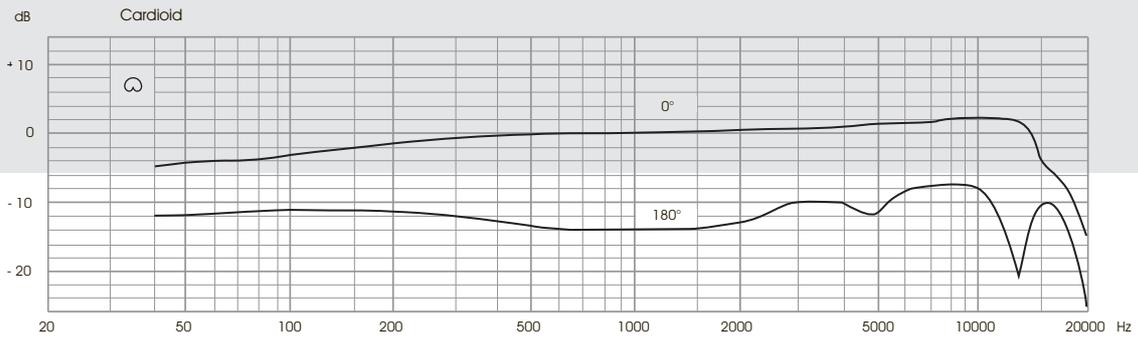
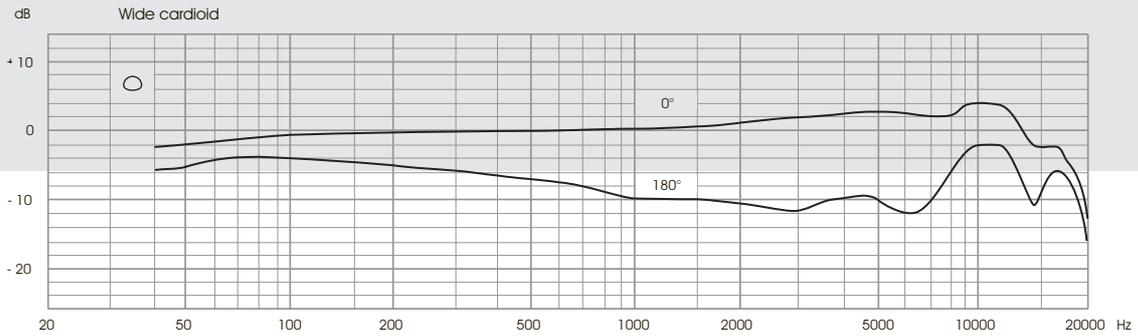
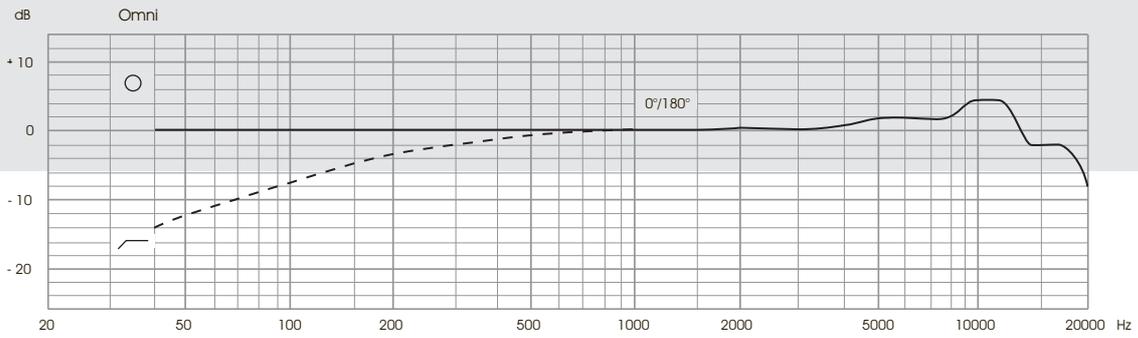
ACCESSORIES, optional

Windscreen, anthracite	W 81	Order-No. 202408
... for mounting with EA 92/MH 80	W 82	Order-No. 202409
Popscreen, black	PO 70	Order-No. 600018
Elastic suspension, satin nickel	EA 92	Order-No. 202312
Elastic suspension, dark bronze	EA 92	Order-No. 202313
Microphone holder, satin nickel	MH 80	Order-No. 202320
Microphone holder, dark bronze	MH 80	Order-No. 202322
Power supply	N 200	Order-No. 202101
Connection cable	C 70	Order-No. 202212

CE Certificate

SPECIFICATIONS		UM 900
Polar patterns		omni, wide cardioid, cardioid, hypercardioid, fig-8
Acoustical operating principle		Pressure gradient transducer
Large diameter diaphragm capsule		dual diaphragm
Frequency range		40 ... 18000 Hz
Sensitivity at 1 kHz		25/ cardioid 40 mV/Pa
Level selector switch		-10/ cardioid +4 dB
Switch position "reduced bass roll-off" at 70 Hz		-10 dB
Output impedance		30 Ω
Equivalent loudness level	CCIR 468-4	26 dB
due to inherent noise	DIN EN 60 651	16 dB - A
Signal-to-noise ratio	CCIR-weighted	68 dB
(re 1 Pa at 1 kHz)	A-weighted	78 dB
Max. SPL for THD \leq 0,5 %		130 dB
with 10 dB preattenuation		140 dB
Dynamic range		114 dB
Current consumption (P 48, DIN 45596, IEC 268-15)		4 mA
Output connector		3-pin XLR-connector goldplated contacts
Sub-miniature tube		low-noise version
Weight		900 g
Dimensions (L x \varnothing)		200 mm x 75 mm
Finish		satin nickel, dark bronze

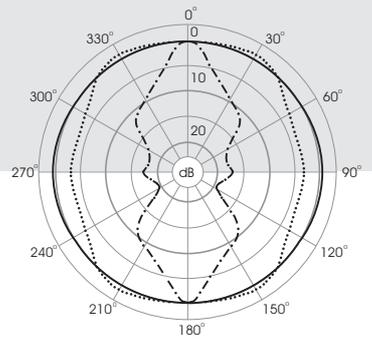
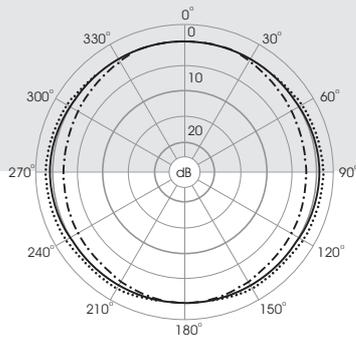
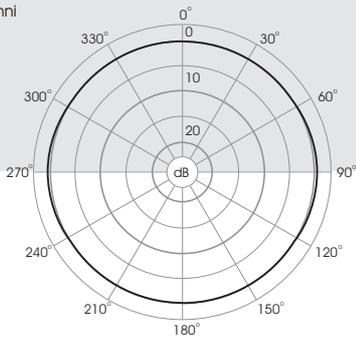
FREQUENCY RESPONSES UM 900



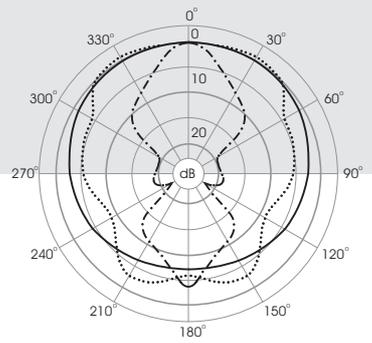
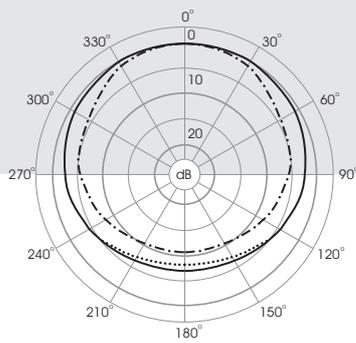
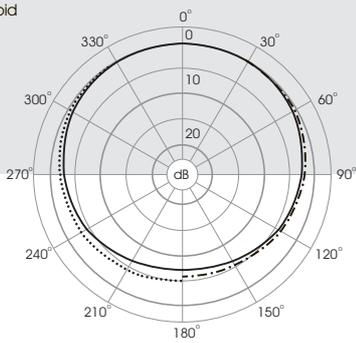
POLAR PATTERNS UM 900



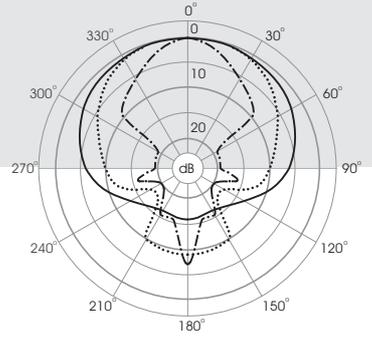
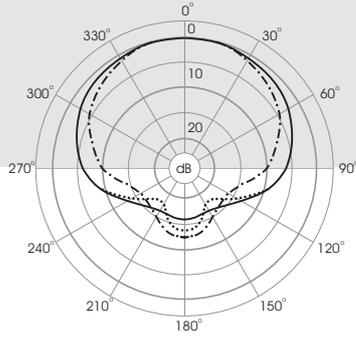
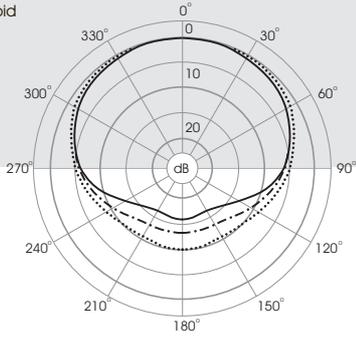
Omni



Wide cardioid



Cardioid



Hyper cardioid

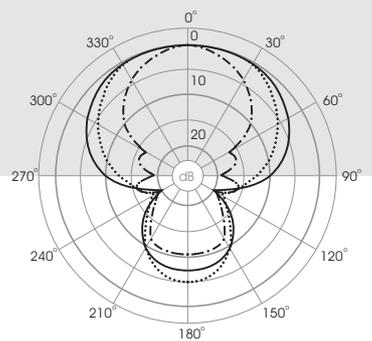
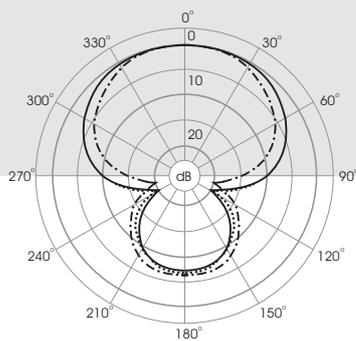
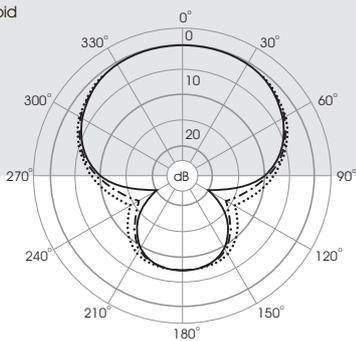
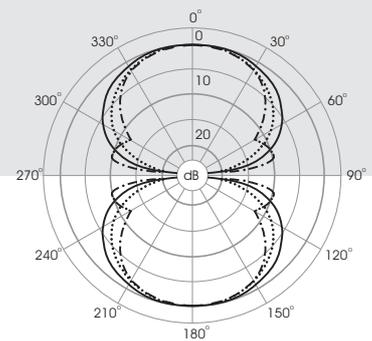
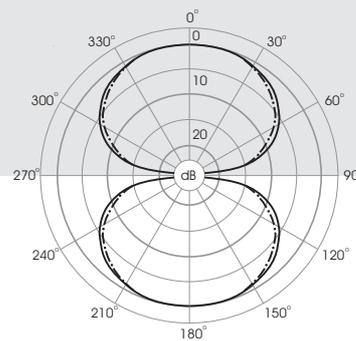
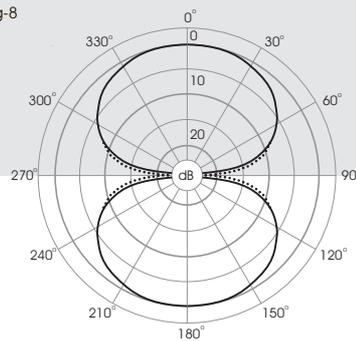


Fig-8



— 1 kHz
 250 Hz
 - - - 500 Hz

— 1 kHz
 2 kHz
 - - - 4 kHz

— 1 kHz
 8 kHz
 - - - 16 kHz