

# KMR 82i

## KMR 82i Condenser Shot Gun Microphone

A condenser shot gun microphone is particularly recommended for use under recording conditions where microphones cannot be positioned within the desired distance of the sound source or, with video recording, when the microphone should not appear on the picture. The NEUMANN KMR 82i condenser shot gun microphone is characterized by its largely frequency-independent rejection of sound incident at an angle to the microphone's axis, by its low self-noise and its good transient behaviour. Its small dimensions and lightweight construction with a favourably placed centre of gravity make for ease of handling.

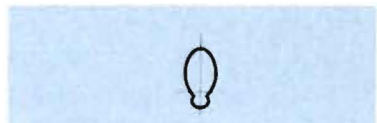
The directional characteristic of the microphone is lobe-shaped. With frequencies of wavelengths longer than the tube the microphone works like a pressure-gradient transducer, whereas for laterally-incident sound above 1.5 kHz it operates according to the phase cancellation principle. As it is desirable that all frequencies be attenuated by the same measure, the interference tube can be kept relatively short. As a result, sound occurring outside the microphone's axis of maximum sensitivity will be picked up with reduced intensity, but without distortion of the sound. It may therefore also be used to record individual instruments in the orchestra separately.

The KMR 82i is highly overload-proof and has a remarkably low noise level. Its current consumption of 0.7 mA, its light weight of 250 g and its insensitivity to wind noise and handling noise make it also ideally suited for on-the-spot reporting. For outdoor use an additional protection from wind is recommendable. For this purpose an expanded polyurethane wind-screen WS 82 is available, which doubles as soft padding when the microphone is in its leather carrying case.

A larger gauze-covered windscreen, model WK 82, enclosing the entire microphone, can be supplied to guard against higher wind speeds. As a further measure against very low frequency sound distortion in the KMR 82i an electrical high-pass filter with a turn-over frequency of 120 Hz may be switched on.

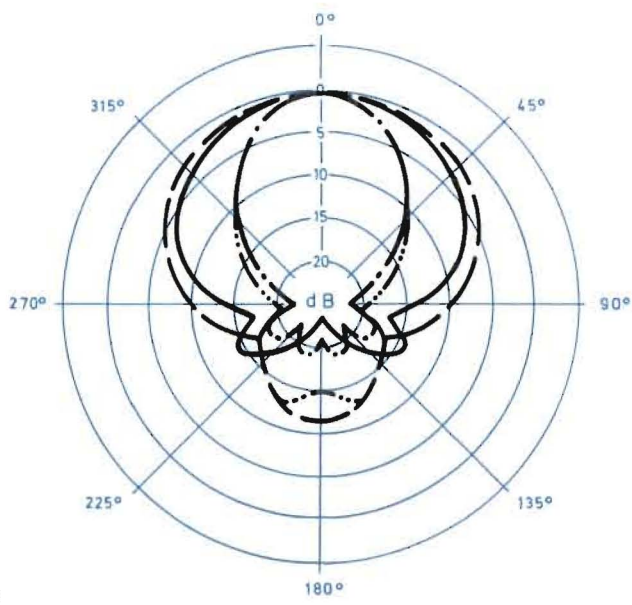
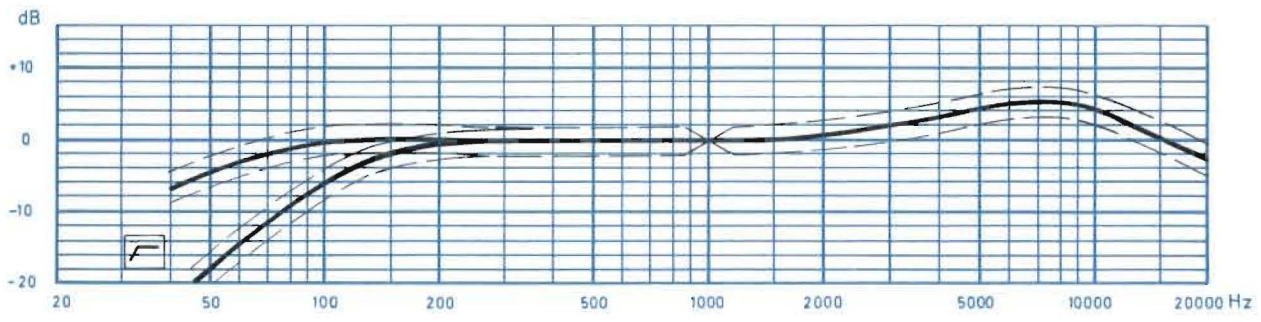
**Recommended Standard Accessories:**  
 An elastic suspension EA 82 to prevent mechanical vibrations. 1/2" female thread.  
 An active handle AG 82i with built-in battery supply which allows minimum continuous operation of 10 hours. The modulation output of the AG 82i is dc free, balanced and floating.

The KMR 82i microphone is equipped with a Switchcraft connector. It is also available with Amphenol-Tuchel or equivalent connectors and is then referred to as KMR 82.



### Specifications

Acoustical operating principle	Pressure gradient-interference transducer
Polar pattern	Lobe shaped (Shot gun)
Frequency range	40 Hz . . . 20 kHz
Sensitivity	21 mV / Pa
Source impedance	150 ohms
Minimum load impedance	1000 ohms
S/N ratio according to DIN 45590 (ref. level 1 Pa)	approx. 75 dB
Equivalent noise (weighted noise level according to DIN 45405)	approx. 19 dB
A-weighted equivalent loudness level due to inherent noise (IEC 179)	approx. 12 dB
Capsule capacitance	approx. 40 pF
Max. SPL for 0.5 % THD at 1 kHz	128 dB = 50 Pa
Power supply	48 V $\pm$ 6 V - 8 V Phantompowering
Current consumption	0.7 mA
Minimum operating time on batteries	approx. 10 hours
Weight	250 g
Dimensions	395 mm long, 21 mm in diam.
Required cable connector	A3F Switchcraft
0 dB SPL = 20 $\mu$ Pa 1 Pa = 10 $\mu$ bar = 94 dB SPL	



- 125 Hz
- 1 kHz
- 4 kHz
- 8 kHz
- ..... 12,5 kHz



**Accessories for KMR 82i and KMR 82 Condenser Shotgun Microphones**

Several special accessories have been developed for the KMR 82 condenser shotgun microphone to ensure optimum adaptability to location sound recording, fishpole, floor stand or boom applications.

The H 82 mounting bracket (1) holds the microphone firmly in place. It attaches to the SG 82 swivel mount (2), the HG 82 handle (3), or the AG 82 active handle (4; see overleaf for detailed information on active handle).

The EA 82 elastic suspension (5) is used to prevent the microphone from being exposed to mechanical vibrations. It attaches to the swivel mount, the handle, or the active handle the same way the H 82 mounting bracket does.

For outdoor applications we recommend use of additional protection from wind noise. The WS 82 polyurethane windscreen (6) not only guards against disturbances caused by wind; it also serves as a soft padding when the microphone is transported in its leather carrying case (7). If protection from higher wind speeds is required, use of the larger gauze-covered WK 82 polyester windscreens which enclose the entire microphone is preferable.

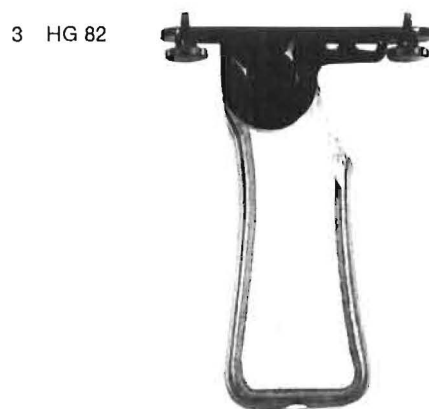
Fig. 9 shows a cutaway view of a WK 82 polyester windscreens. Inside the WK 82 the EA 82 elastic suspension with the KMR 82i microphone is attached to the SG 82 swivel mount. The WS 82 (also shown partly cut away) is slid over the microphone as well. The right-hand end cap of the WK 82 windscreens is removable to allow the microphone and the elastic suspension to be inserted. As can be seen from the picture, the elastic suspension is firmly screwed on to the swivel mount by means of the two knurled screws which protrude through the windscreens wall from the swivel mount. The EA 82 elastic suspension, the AG 82 (i) active handle and SG 82 swivel mount have a 5/8"-27 thread for mounting on microphone stands. Using a thread reducer, mounting on 1/2" or 3/8" thread studs is also possible. The HG 82 handle has a 3/8" female thread.



1 H 82



2 SG 82



3 HG 82



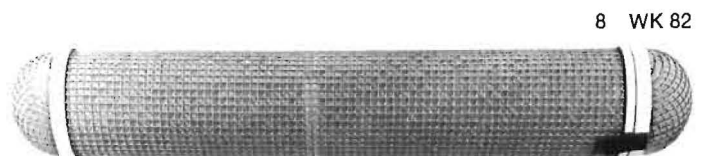
5 EA 82



6 WS 82



7



8 WK 82



9

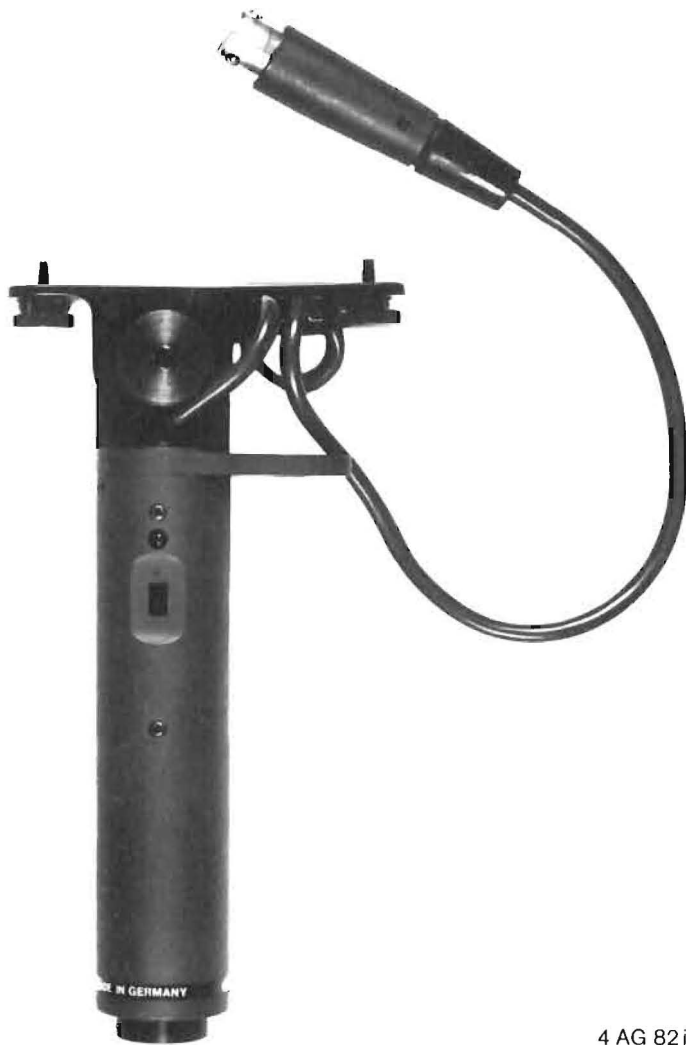
A leather carrying case (7) and the WS 82 polyurethane windscreen (6) are standard accessories included with each KMR 82 (i) condenser shotgun microphone. Further accessories can be ordered separately. Please use item descriptions and catalog numbers given below.

- H 82 Mounting bracket      Catalog No. 12401001
- SG 82 Swivel mount        Catalog No. 11327001
- HG 82 Handle                Catalog No. 11450001
- AG 82 Active handle        Catalog No. 11448001
- AG 82 i Active handle      Catalog No. 11448002
- WK82 Polyester windscreen Catalog No. 11449001
- EA 82 Elastic Suspension    Catalog No. 11447001
- WS82 Polyurethane windscreen  
    (spare)                      Catalog No. 8688000001.5
- Leather carrying case  
    (spare)                      Catalog No. 08107-000-064

The AG 82 (i) active handle has been designed primarily to make the KMR 82 (i) condenser shotgun microphone independent from an external power supply. It is powered by a standard 9 Volt battery (IEC 6 F 22) whose potential is stepped up to 48 Volts by means of a dc converter. After unscrewing the jacket, the battery is easily installed in the lower part of the handle. A fully charged battery permits at least 10 hours of continuous operation. The cable leading from the top of the swivel mount is used to power the microphone (48 Volt phantom powering,  $\leq 1.5 \text{ mA}$ ); the connection at the bottom end is the floating, balanced, and dc-free output for transmission of the modulation to any type of input.

Specifications:

- Power supply                One 9 Volt dry cell  
                                      (IEC 6 F 22)
- Available phantom  
powering                    48V at  $\leq 1.5 \text{ mA}$
- Microphone input        Balanced, wired to  
                                      DIN 45596 for  
                                      phantom powering



4 AG 82 i

