



**C 480 B comb-ULS/61**

**C 480 B**

**CK 61-ULS**

**CK 62-ULS**

**CK 63-ULS**

**Bedienungshinweise**

**User Instructions**

**Mode d'emploi**

**Istruzioni d'uso**

**Modo de empleo**

## Introduction:

The AKG staff of engineers have concentrated their efforts and know-how to produce a microphone which is equal to and, in fact, deserving of the pristine transmission qualities of Digital Technology. The electronics of the new microphones are a completely new departure, and the key to the digital-level performance of the microphone. The resulting technical specifications are unique among today's microphones and will remain in the forefront of even tomorrow's microphones.

### **The microphone system may be delivered as follows:**

C 480 B comb-ULS/61 Cardioid condenser microphone  
C 480 B Microphone preamp/powering module  
CK 61-ULS Cardioid condenser capsule  
CK 62-ULS Omni-directional capsule  
CK 63-ULS Hypercardioid condenser capsule  
CK 69-ULS Condenser shotgun capsule

### **The following main features are provided:**

- Extremely linear in respect to frequency response, and electrical data
- Ultra low noise figures
- High operating reliability
- Extremely low distortion
- Low power consumption
- Extended long-life stability
- Built-in attenuation switch with 0 and -10 dB position
- Built-in +6 dB gain switch
- Two bass-cut positions with onset at 70 Hz and 150 Hz
- To be powered from a 48 volts phantom powering source (acc. to DIN 45596)

### **The following accessory is included:**

#### **– with the C 480 B comb-ULS/61:**

- SA 40 „quick release“ stand adapter
- W 32 foam-type windscreen
- Original frequency response curve

#### **– with the C 480 B:**

- SA 40 “quick release” stand adapter

### Optional Accessories:

H 30	Elastic Suspension
H 38	Elastic Shock Mount
SA 38/H	Elastic Shock Mount/Stand Adapter Combination
KA 38	Camera Adapter to operate the Microphone via the H 38 on Film- or Video-Cameras.
B 18 + A 48 V	Battery Supply Unit + 48V Adapter
N 62 E	Power Supply Unit for two microphones
N 66 E	Power Supply Unit for six microphones

### General Description:

The design of this microphone is based on over thirty years of experience and gained know-how in condenser microphone development of our R & D engineers and at the same time considers new and future orientated technologies. The microphone meets therefore the highest technical standards and will withstand rough handling in studio applications. Special attention has been paid within this microphone to the complete linear transfer characteristics of all transmission parameters.

The low inherent self-noise and the high overload point guarantees a dynamic range of this microphone of more than 120 dB, which is substantially more than figures found in conventional microphones and other associated equipment.

The **switchable attenuation** of the output level by **10 dB** is especially useful in connection with high sound pressure levels (when used in close proximity to high-energy sound sources) and using input stages of amplifiers or mixing desks with limited input level capabilities. Otherwise, this associated equipment will overload before the maximum overload point of the microphone has been reached.

The switchable +6 dB preamplifier gain boost is a

particular advantage when using the C 480 B with the CK 69-ULS shotgun capsule which normally is used relatively far from the sound source so the wanted sound level at the microphone will be comparatively low.

The incorporated **bass-cut filter** reduces the risk of distortion at low frequencies. This feature is especially useful in combating wind noise or stage floor vibration. The slope of the bass-cut filter is more than 12 dB/octave, the cut-off frequency may be set to **70 Hz** or **150 Hz**.

The all-metal housing effectively rejects r.f. interference when the microphone is used in close proximity to transmitter stations or in conjunction with wireless microphones or other communication equipment.

### **Cleaning hints**

All metal surfaces may be safely cleaned from time to time with methylated spirit or alcohol. The foam windscreen should be occasionally soaked in a non-aggressive detergent/water solution and will be ready for use after drying.

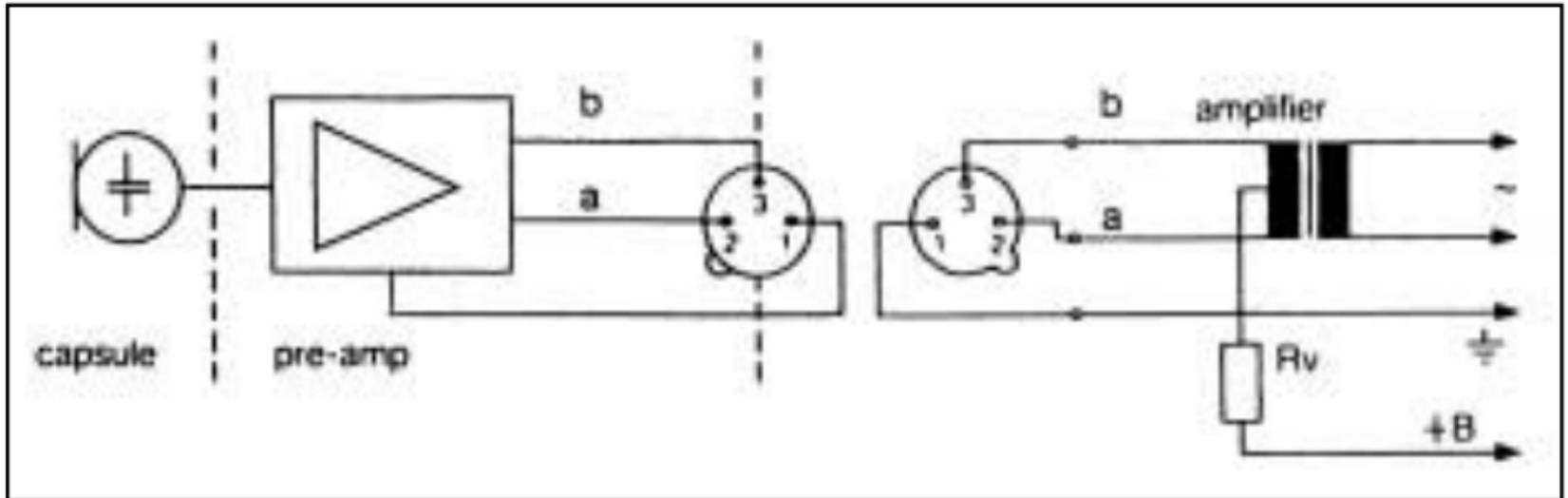
If you want to learn more about microphones and their applications, get a copy of "**MICROPHONES: technique & technology**" by Norbert Pawera. The book is published by "Arsis Baedeker und Lang Verlags GmbH" and available at your local music shop. Both studio and "onstage" applications are discussed in detail.

## Powering

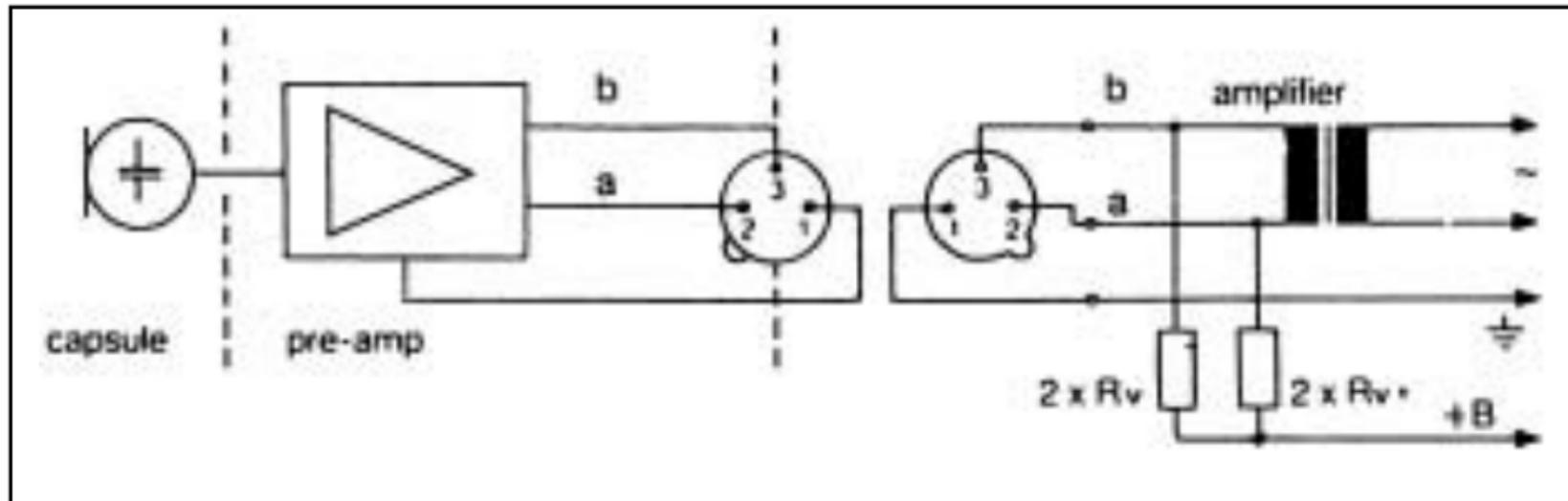
The C 480 B preamplifier may be powered in phantom technique according to DIN 45596. These stan-

dards specify a positive voltage on the audio lines versus the screen of the audio cable of 48 volts. The two possible wiring methods are shown below:

a) circuitry incorporates input transformer **with** centre tap (ungrounded)



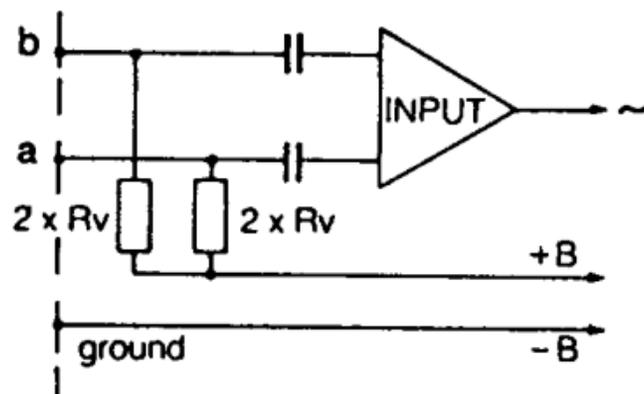
b) circuitry incorporates input transformer **without** centre tap (ungrounded)



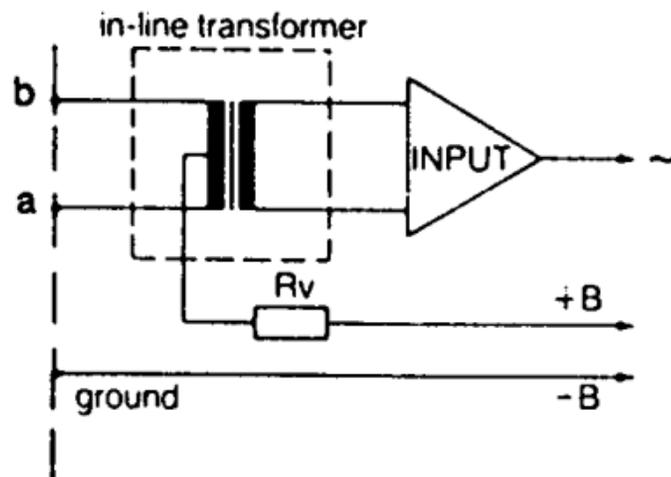
The following values for  $R_v$  (or  $2 \times R_v$ ) are standardised:

$U =$	$R_v$	$2 \times R_v$
$48 \text{ V} \pm 4 \text{ V}$	$3300 \text{ Ohm}$	$6800 \text{ Ohm}$

The resistors  $2 \times R_v$  have to be of at least 0.5 % tolerance type to satisfy the symmetry requirements.



In case where single ended (grounded) amplifier inputs, or where no input transformers are available, either capacitors or optional transformers have to be wired into the audio lines to prevent any current leakage into the input circuitry.



## Specifications

### C 480 B comb-ULS/61:

Type:	Pressure gradient microphone
Frequency range:	20 to 20.000 Hz $\pm$ 1 dB from specified curve
Sensitivity at 1000 Hz	
0 dB position:	20 mV/Pa $\triangleq$ -34 dBV*)
+6 dB position:	40 mV/Pa $\triangleq$ -28 dBV*)
-10 dB position:	6.3 mV/Pa $\triangleq$ -44 dBV*)
Polar pattern:	Cardioid
Equivalent noise level to DIN 45 405 (CCIR 468-2)	
0 dB position:	18 dB
+6 dB position:	22 dB
-10 dB position:	27 dB
Equivalent noise level to DIN 45 412 (A weighted)	
0 dB position:	11 dB-A
+6 dB position:	13 dB-A
-10 dB position:	17 dB-A

\*) re 1 V/Pa

Signal/noise ratio re 1 Pa (A weighted)

0 dB position:	83 dB
+6 dB position:	81 dB
-10 dB position:	77 dB

Max. SPL for 0.5 % THD

0 dB position:	200 Pa $\triangleq$ 140 dB SPL**)
+6 dB position:	100 Pa $\triangleq$ 134 dB SPL**)
-10 dB position:	316 Pa $\triangleq$ 144 dB SPL**)

Dynamic range (A weighted)

0 dB position:	129 dB
+6 dB position:	121 dB
-10 dB position:	127 dB

Operating temperature: -20 °C to +60 °C

Environment

Relative humidity:	99 % at +20 °C
	95 % at +60 °C

\*\*) into recommended load impedance, 20 Hz to 20 kHz

This product conforms to EN 50 082-1 and EN 50 081-1.

## Specifications

### C 480 B + CK 62 - ULS

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Transducer type:	pressure receiver
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Polar pattern:	omni-directional
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**The remaining specifications are identical to those of C 480 B + CK 61 - ULS**

### C 480 B + CK 63 - ULS

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Transducer type:	pressure gradient receiver
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Polar pattern:	hypercardioid
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**The remaining specifications are identical to those of C 480 B + CK 61 - ULS**

## Specifications

### C 480 B Preamplifier

Frequency range:	10 to 30.000 Hz $\pm$ 0.3 dB
Bass cut filter slope:	12 dB/octave, for all positions
Gain:	+6 dB, 0 dB, -10 dB, selectable
Impedance:	$\leq$ 150 $\Omega$
Recommended load impedance:	2000 $\Omega$ // 1 nF (IEC 268-15 A)
Hum sensitivity at 50 Hz:	Lower than self-noise
Supply voltage:	P 48 (phantom power to DIN 45 596 at 48 V $\pm$ 4 V)
Current consumption:	$\leq$ 2 mA
Size:	Dia.: 21 mm (0.8 in.); length: 150 mm (6 in.)
Net/shipping weight:	100 g (3.5 ozs.)/500 g (17.7 ozs.)
Connector:	3-pin XLR type
Case material:	Matte black brass
Capsule contacts:	Self-cleaning, gold plated
Thread:	M 19 x 0.75

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Technische Änderungen vorbehalten. Specifications subject to change without notice. Ces caractéristiques sont susceptibles de modifications.  
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