



H A Harman International Company

# ULS Series

## Condenser Microphones

### Description

The AKG C 480 B preamplifier powering unit is the latest model in the ULS series. It accommodates the CK 61-U LS, CK 62-U LS, CK 63-U LS capsules and the new CK 69-U LS shotgun capsule, providing a higher order of performance for these capsules than heretofore available. The new preamp has a vastly improved noise floor, permitting self noise performance with the four associated capsules in the range of 9 to 11 dB-A. Maximum sound pressure levels in the range of 144 dB (in the -10 dB sensitivity position) can be attained with no greater than 0.5 % distortion, giving the capsules a new level of overall performance. An integral low cut filter (12 dB/octave) can be set for either 150 or 70 Hz. The +6 dB sensitivity position is intended to enhance the performance of older console input circuitry to allow the benefit of low microphone self noise to be realized. With the available cardioid, hypercardioid, omnidirectional, and highly directional shotgun element, the C 480 Series is intended primarily for studio, broadcast and a variety of live sound and speech reinforcement applications in which state-of-the-art performance is mandated. A complete line of optional accessories is available. The C 480 B operates only on 48 volts phantom powering.

### Features

- **Ultralow noise preamplifier for use with ULS series capsules**
- **Multiple directional capsules and configurations available on a high performance powering/preamp module**
- **Extremely flat on-axis response for all models**
- **Three sensitivity settings (0, +6, and -10 dB)**
- **High acoustic level capability**



# Specifications (measured with C 480 B preamp)

Models:	CK 61-ULS:	CK 62-ULS:	CK 63-ULS:	CK 69-ULS:
<b>Transducer Principle:</b>		All models externally polarized condenser capsules.		
<b>Frequency Range</b>	20–20,000 Hz ± 1 dB	20–20,000 Hz ± 1 dB	20–20,000 Hz ± 1 dB	20–18,000 Hz ± 2 dB
<b>Polar Pattern:</b>	Cardioid	Omnidirectional	Hypercardioid	Shotgun (2-section)
<b>Sensitivity at 1,000 Hz:</b>				
<b>(0 dB setting):</b>	20 mV/Pa; -34 dBV	20 mV/Pa; -34 dBV	20 mV/Pa; -34 dBV	27 mV/Pa; -31 dBV
<b>(+6 dB setting):</b>	40 mV/Pa; -28 dBV	40 mV/Pa; -28 dBV	40 mV/Pa; -28 dBV	54 mV/Pa; -25 dBV
<b>(-10 dB setting):</b>	6.3 mV/Pa; -44 dBV	6.3 mV/Pa; -44 dBV	6.3 mV/Pa; -44 dBV	8.5 mV/Pa; -41 dBV
<b>Equivalent Noise Level:</b>				
<b>(0 dB setting):</b>	11 dB-A	11 dB-A	11 dB-A	9 dB-A
<b>(+6 dB setting):</b>	13 dB-A	13 dB-A	13 dB-A	11 dB-A
<b>(-10 dB setting):</b>	17 dB-A	17 dB-A	17 dB-A	15 dB-A
<b>Max. SPL for 0.5 % THD</b>				
<b>(0 dB setting):</b>	140 dB	140 dB	140 dB	140 dB
<b>(+6 dB setting):</b>	134 dB	134 dB	134 dB	134 dB
<b>(-10 dB setting):</b>	144 dB	144 dB	144 dB	142 dB
<b>S/N Ratio (:</b>				
<b>(0 dB setting):</b>	83 dB	83 dB	83 dB	85 dB
<b>(+6 dB setting):</b>	81 dB	81 dB	81 dB	83 dB
<b>(-10 dB setting):</b>	77 dB	77 dB	77 dB	79 dB

<b>Model:</b>	<b>C 480 B</b>
<b>Electr. Impedance:</b>	≤ 150 ohms (transformerless)
<b>Load Impedance:</b>	> 2,000 ohms in parallel with 1,000 pF
<b>Power Requirement:</b>	48 volts phantom power (±4 volts)
<b>Connector:</b>	3 pin XLR type
<b>Size:</b>	dia 21 mm (0.8 in.) length 150 mm (5.9 in.)

Models:	C 480 B with CK 61-ULS:	C 480 B with CK 62-ULS:	C 480 B with CK 63-ULS:	C 480 B with CK 69-ULS:
<b>Finish:</b>	non reflective black	non reflective black	non reflective black	non reflective black
<b>Size of Microphone</b>	dia 21 mm (0.83 in.)	dia 21 mm (0.83 in.)	dia 21 mm (0.83 in.)	dia 21 mm (0.83 in.)
<b>Combinations:</b>	length 173 mm (6.8 in.)	length 173 mm (6.8 in.)	length 173 mm (6.8 in.)	length 326 mm (12.8 in.) (for single section) length 467 mm (18.4 in.) (for dual section)

Models:	CK 61-ULS:	CK 62-ULS:	CK 63-ULS:	CK 69-ULS:
	dia 21 mm (0.83 in.) length 26.5 mm (1.0 in.)	dia 21 mm (0.83 in.) length dia 26.5 mm (1.0 in.)	dia 21 mm (0.83 in.) length 26.5 mm (1.0 in.)	dia 21 mm (0.83 in.) length 176 mm (6.9 in.) (for single section) 317 mm (12.5 in.) (for dual section)

Models:	C 480 B:	CK 61-ULS:	CK 62-ULS:	CK 63-ULS:	CK 69-ULS:
<b>Net/Shipping Weight:</b>	100 g (3.5 oz.)/ 500 g (18 oz.)	25 g (0.9 oz.)/ 150 g (5.3 oz.)	25 g (0.9 oz.)/ 150 g (5.3 oz.)	25 g (0.9 oz.)/ 150 g (5.3 oz.)	70/100 g (2.5/3.5 oz.)/ 480 g (1.1 lbs.)

**Included Accessories:** SA 40 Stand adapter, W 32 Foam windscreen (for CK 61-ULS, 62-ULS, and 63-ULS), Foam windscreens for both tube lengths (CK 69-ULS)

**Optional Accessories:** H 30 Elastic suspension, N 62 E, N66 E AC Power supplies, B 18 Battery power supply, SA 38 H Stand adapter/suspension, SA 18/2B All-metal stand adapter, A 61 Swivel adapter, VR 61 30-cm (12 in.) Extension tube, W 46 All-metal windscreen, VR 62 90-cm (3 ft.) Extension tube.

## Architect's and Engineer's Specifications

### C 480 B with CK 61-ULS

The microphone shall be of the condenser type with capsule and powering module assembly no larger than 21 mm (0.8 in.) in diameter. The microphone shall accept phantom powering at 48 volts. The nominal output impedance shall be equal to or less than 150 ohms at 1 kHz, and the output shall be transformerless. The microphone shall provide a three position control for normal (0 dB), elevated sensitivity (+6 dB), and attenuated (-10 dB) sensitivity. Switchable low-frequency cuts

at 150 Hz and 75 Hz at 12 dB/octave shall be provided.

The polar pattern shall be cardioid and nominal on-axis frequency response shall be 20 Hz-20 kHz. For the normal sensitivity setting of 0 dB, microphone sensitivity shall be at least 20 millivolts per Pascal, and the self noise floor shall be no higher than 11 dB-A. The 0.5 % THD operating level shall be no lower than 140 dB SPL.

The microphone shall be the AKG model C 480 B preamp operating with the AKG model CK 61-ULS capsule.

### C 480 B with CK 62-ULS

The microphone shall be of the condenser type with capsule and powering module assembly no larger than 21 mm (0.8 in.) in diameter. The microphone shall accept phantom powering at 48 volts. The nominal output impedance shall be equal to or less than 150 ohms at 1 kHz, and the output shall be transformerless. The microphone shall provide a three position control for normal (0 dB), elevated sensitivity (+6 dB), and attenuated (-10 dB) sensitivity. Switchable low-frequency cuts

at 150 Hz and 75 Hz at 12 dB/octave shall be provided.

The polar pattern shall be omnidirectional and nominal on-axis frequency response shall be 20 Hz-20 kHz. For the normal sensitivity setting of 0 dB, microphone sensitivity shall be at least 20 millivolts per Pascal, and the self noise floor shall be no higher than 11 dB-A. The 0.5 % THD operating level shall be no lower than 140 dB SPL.

The microphone shall be the AKG model C 480 B preamp operating with the AKG model CK 62-ULS capsule.

### C 480 B with CK 63-ULS

The microphone shall be of the condenser type with capsule and powering module assembly no larger than 21 mm (0.8 in.) in diameter. The microphone shall accept phantom powering at 48 volts. The nominal output impedance shall be equal to or less than 150 ohms at 1 kHz, and the output shall be transformerless. The microphone shall provide a three-position control for normal (0 dB), elevated sensitivity (+6 dB), and attenuated (-10 dB) sensitivity. Switchable low-frequency cuts

at 150 Hz and 75 Hz at 12 dB/octave shall be provided. The polar pattern shall be hypercardioid and nominal on-axis frequency response shall be 20 Hz-20 kHz. For the normal sensitivity setting of 0 dB, microphone sensitivity shall be at least 20 millivolts per Pascal, and the self noise floor shall be no higher than 11 dB-A. The 0.5 % THD operating level shall be no lower than 140 dB SPL. The microphone shall be the AKG model C 480 B preamp operating with the AKG model CK 63-ULS capsule.

### C 480 B with CK 69-ULS

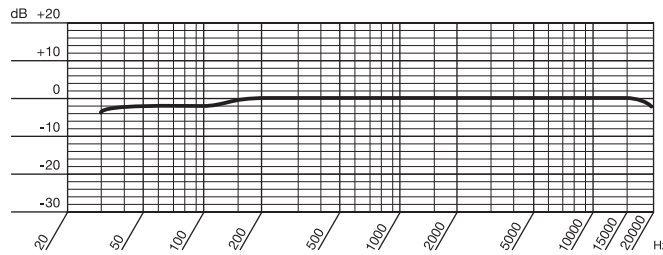
The microphone shall be of the condenser type with capsule and powering module assembly no larger than 21 mm (0.8 in.) in diameter. The microphone shall accept phantom powering at 48 volts. The nominal output impedance shall be equal to or less than 150 ohms at 1 kHz, and the output shall be transformerless. The microphone shall provide a three position control for normal (0 dB), elevated sensitivity (+6 dB), and attenuated (-10 dB) sensitivity. Switchable low-frequency cuts at 150 Hz and 75 Hz at 12 dB/octave shall be provided. The polar pattern shall be two-section shotgun and nominal on-axis frequency response shall be

20 Hz-18 kHz. For the normal sensitivity setting of 0 dB, microphone sensitivity shall be at least 27 millivolts per Pascal, and the self noise floor shall be no higher than 9 dB-A. The 0.5 % THD operating level shall be no lower than 140 dB SPL. The microphone capsule shall consist of two sections. The total length of the microphone with a single capsule length shall be no greater than 326 mm (12.8 in.), and for the dual capsule the length shall be no greater than 467 mm (18.4 in.). The microphone shall be the AKG model C 480 B preamp operating with the AKG model CK 69-ULS capsule.

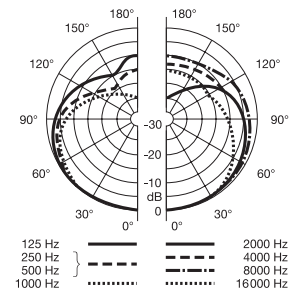
## Graphical Data

### CK 61-ULS

On-axis Frequency Response  
(measured at 1 meter)

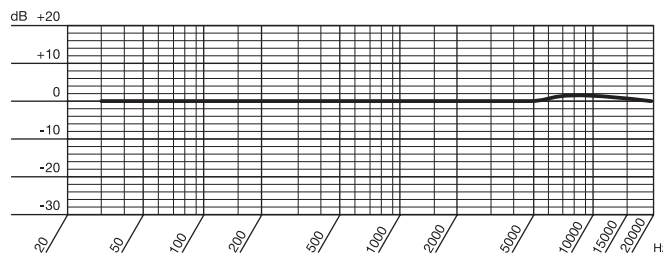


Polar Response

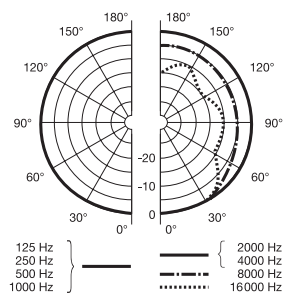


### CK 62-ULS

On-axis Frequency Response  
(measured at 1 meter)

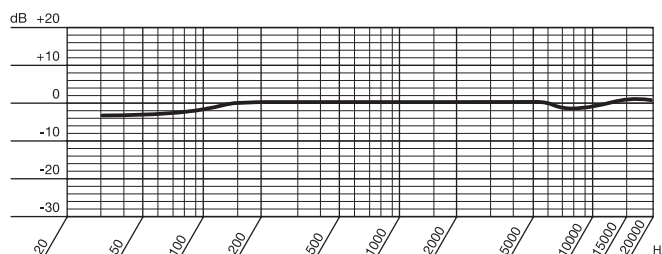


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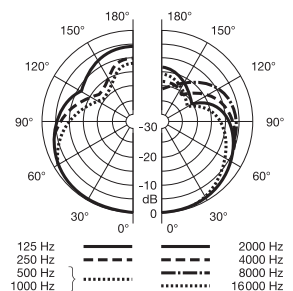


### CK 63-ULS

On-axis Frequency Response  
(measured at 1 meter)



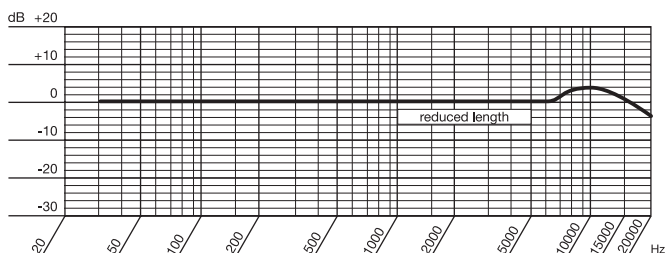
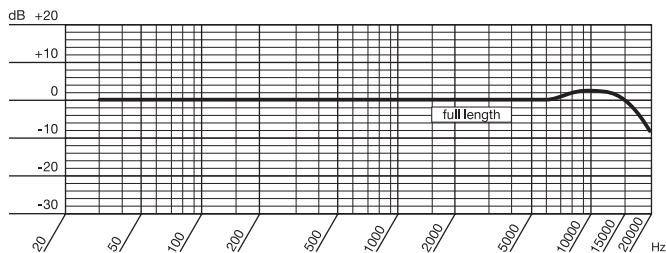
Polar Response



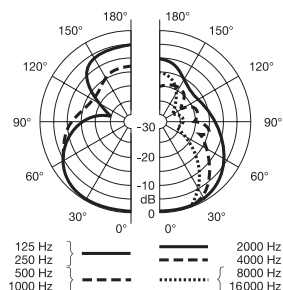
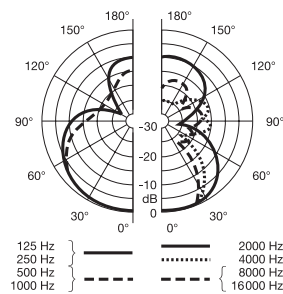
# Graphical Data (continued)

**CK 69-ULS**

On-axis Frequency Response  
(measured at 1 meter)



Polar Response



AKG is constantly improving and modifying its products, therefore, specifications are subject to change without notice.

## Limited Warranty

Valid only in the United States. AKG Acoustics warrants AKG products against defects in material or workmanship for a period of one year from the date of original purchase for use, and agrees to repair or, at our option, replace any defective unit without charge for either parts or labor. Important: This warranty does not cover damage resulting from accident, misuse or abuse, lack of reasonable care, the affixing of any attachment not provided with the product, loss of parts or connecting the product to any but the specified receptacles. This warranty is void unless service or repairs are performed by an authorized service center.

No responsibility is assumed for any special, incidental or consequential damages. However, the limitation of any right or remedy shall not be effective where such is prohibited or restricted by law. Simply take or ship you AKG product prepaid to our service department. Be sure to include your sales slip as proof of purchase date. (We will not repair transit damage under the no-charge terms of this warranty.) Note: No other warranty, written or oral is authorized by AKG Acoustics, Inc. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitation on how long an implied warranty lasts, so the above exclusions and limitation may not apply to you.

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