C-535EB PRE-POLARIZED CONDENSER CARDIOID MICROPHONE

The new AKG C-535EB is unique in the field: it combines AKG's excellence in sound quality with a new level of durability. In short, it has done for condenser microphones what the D-300's have done for dynamic microphones.

The sound of the C-535EB is crystal clear and open, with a slightly rising high-frequency response to bring out the character of voices and instruments. Its cardioid polar pattern is quite uniform at all frequencies to avoid feedback and coloration of off-axis sound.

The transducer system is a permanently-charged condenser and is field replaceable by competent maintenance technicians. The housing is exceedingly durable, made of die-cast zinc. The complete transducer is shock suspended and is enclosed in a black stainless-steel windscreen.

Perhaps the most unique feature of the AKG C-535EB is its output level/bass rolloff switch. Many condenser microphones (including the C-450 series, C-414EB, C-422, etc.) make use of attenuators placed between the transducer and the preamplifier input to reduce the electrical input to the preamplifier when very high sound pressure levels are being picked-up. This prevents distortion due to microphone preamplifier overload, and is very useful where extremely close mic'ing of instruments is a common practice. In the field, (where the C-535EB is primarily intended to be used) mixer input overload is a far more common problem, as many mixer input circuits and transformers are not capable of withstanding the high electrical output levels of condenser microphones. If the traditional microphone input attenuator is used to resolve this problem, reducing the mic's output level a price is paid in the microphone's signal-to-noise ratio: the attenuator reduces the acoustical signal, but not the self-noise of the microphone preamplifier which follows the attenuator.

The C-535, on the other hand, actually reduces the total output level of both the signal and the mic's self noise, maintaining the signal-to-noise ratio.

Further, a flat response and two bass-rolloff curves are provided, linked to the output level settings:
- in each output level: flat response
- in "full" output level: sharp cutoff
- in "reduced" output level: gradual rolloff

The logic behind these pairings is that the "reduced" output level will most likely be needed for instrument mic'ing. Therefore a "proximity-effect cancelling" gradual rolloff would be needed. The "full" output level will be used for vocals, where a sharp cutoff is necessary to reduce handling noise and popping while maintaining proximity effect for the desired "full bodied" sound.

The "full output" level of the C-535EB is -42 dBm, typical of studio condenser microphones; while the "reduced" output level is -56 dBm, typical of most handheld dynamic microphones.

Maximum sound pressure level capability of the C-535EB is as good as many expensive studio condenser microphones; 130 dB SPL in "full output" mode, and 144 dB SPL in "reduced output" mode.

The C-535EB requires phantom powering in the 9-52 volt range (from mixer, tape recorder, or any AKG accessory AC or battery power supply), eliminating the risk of damage from exhausted internal batteries and the effects of Murphy's Law (the batteries only die on Sunday night when every store is closed).

Applications for the C-535EB range from a "First Class" live-performance vocal and instrumental mic to studio applications, as an excellent announcer/DJ mic, as a podium mic or a choir pick-up.
## TECHNICAL DATA

**Transducer Type:** Pre-polarized Condenser  
**Directional Characteristic:** Cardioid  
**Frequency Range:** 20-20,000 Hz  
**Nominal Impedance at 1 kHz:** ≤ 200 ohms  
**Rated Impedance Category:** 200 ohms  
**Recommended Load Impedance:** ≥ 500 ohms  
**Hum Sensitivity (1 mG field):** -139 dBm  
**DC Phantom-Power Requirements:** 9-52 v, 1 mA  
**Case Material:** Satin black die-cast zinc alloy  
**Control Facilities:** See text  
**Net Weight:** 300 g (≈ 11 oz)  
**Included Accessories:**  
- SA-31 flex snap-in stand adapter with 5/8-in. -27 thread  
- Foam-lined vinyl case  
**Rated-Impedance Category:** 200 ohms  
**Net Weight:** 300 g (≈ 11 oz)  
**Recommended Load Impedance:** ≥ 500 ohms  

- **Sensitivity at 1 kHz (zero attenuation):**  
  - Open circuit: 7 mV/Pa; -43.1 dBV*  
  - Maximum power level: -42 dBm (re: 1mW/10 dynes/cm²)  
  - EIA G?m: -135 dBm  
  - Tolerance: ±3 dB  
- **Sound Pressure Level for 1% THD (1000 Hz):**  
  - Zero attenuation: 130 dB  
  - -14 dB attenuation: 144 dB  
- **Typical Self-Noise (zero attenuation):**  
  - CCITT-C wtd: 1.8 µV  
  - Equiv. SPL: 21 dB  

*1 Pa (Pascal) = 10 µb = 10 dynes/cm² = 94 dB SPL  

**1 Full sensitivity, full frequency response  
2 Full sensitivity, 12 dB/octave cut-off below 100 Hz  
3 -14 dB sensitivity, full frequency response  
4 -14 dB sensitivity, 6 dB/octave roll-off with below 500 Hz**