

## AKG CM311 AESH

# AKG CM311 AESH Head-Worn Condenser Microphone User Manual

Model: CM311 AESH | Brand: AKG Pro Audio

## INTRODUCTION

The AKG CM311 AESH is a reference head-worn condenser microphone engineered for touring and live sound applications. It delivers clear, distortion-free audio performance, even in high-volume environments. Featuring Differoid technology, this microphone effectively cancels ambient noise from stage monitors, audience, and other sources, providing up to 12dB more gain before feedback compared to conventional cardioid microphones. This design ensures superior isolation, contributing to a cleaner overall sound mix. The CM311 AESH is specifically designed for compatibility with Shure wireless body-pack transmitters, utilizing a three-pin mini XLR connector.



Figure 1: AKG CM311 AESH Head-Worn Condenser Microphone. This image shows the microphone with its headband and boom arm, ready for use.

## SETUP INSTRUCTIONS

1. **Unpacking:** Carefully remove the microphone and all accessories from its packaging. Inspect for any visible damage.
2. **Headband Adjustment:**

- Place the headband over your head, ensuring a comfortable and secure fit.
- Adjust the headband size using the sliding mechanisms on each side until it rests firmly but without excessive pressure.
- Position the microphone boom arm so that the microphone capsule is located approximately 0.5 to 1 inch (1.2 to 2.5 cm) from the corner of your mouth. The microphone should be positioned to the side of your mouth, not directly in front, to minimize plosives and breath noise.
- Tighten any adjustment knobs on the boom arm to secure its position. Ensure the boom arm is stable and does not move during performance.

### 3. Connection to Transmitter:

- The CM311 AESH features a three-pin mini XLR connector, designed for direct compatibility with Shure wireless body-pack transmitters.
- Locate the input jack on your Shure body-pack transmitter.
- Align the three-pin mini XLR connector with the input jack and push firmly until it clicks into place. Ensure a secure connection to prevent signal loss.
- If using a wired connection with an appropriate adapter (not included), ensure the adapter provides phantom power as required by condenser microphones.

### 4. Powering On: Refer to your Shure wireless body-pack transmitter's manual for instructions on powering it on and pairing it with your receiver.

## OPERATING INSTRUCTIONS

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### 1. Microphone Positioning:

- For optimal sound quality and to utilize the Differoid noise-cancelling technology effectively, position the microphone capsule close to your mouth, ideally 0.5 to 1 inch (1.2 to 2.5 cm) from the corner of your lips.
- Avoid positioning the microphone directly in front of your mouth to reduce plosive sounds (P, B, T sounds).

### 2. Gain Adjustment:

- Adjust the gain on your wireless transmitter or mixing console. Start with a low gain setting and gradually increase it while speaking into the microphone at your normal performance volume.
- Monitor the input level indicators on your transmitter or mixer to ensure the signal is strong but not clipping (distorting). The Differoid technology provides high gain before feedback, allowing for higher input levels without issues.

### 3. Sound Check:

- Perform a sound check in your performance environment. Speak and sing into the microphone as you would during a live performance.
- Listen for clarity, tone, and any unwanted noise. Adjust EQ settings on your mixer as needed to achieve the desired sound.
- The microphone's cardioid polar pattern and Differoid noise cancellation are designed to reject ambient noise, making it suitable for loud stages with floor monitors.

## MAINTENANCE

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### • Cleaning:

- Regularly wipe the microphone's exterior and headband with a soft, dry cloth.
- For stubborn grime, a slightly damp cloth with mild soap can be used, but ensure no moisture enters the microphone capsule or connector.

- Clean the foam windscreen (pop filter) periodically. It can often be gently removed and hand-washed with mild soap and water, then allowed to air dry completely before reattaching.
- **Storage:**
  - When not in use, store the microphone in its original case or a protective pouch to prevent dust accumulation and physical damage.
  - Avoid storing the microphone in extreme temperatures or high humidity.
- **Handling:**
  - Handle the microphone with care. Avoid dropping it or subjecting it to strong impacts.
  - Be gentle when adjusting the boom arm and headband to prevent stress on the plastic components.

## TROUBLESHOOTING

Problem	Possible Cause	Solution
No Sound Output	<ul style="list-style-type: none"><li>• Incorrect connection to transmitter.</li><li>• Transmitter not powered on or paired.</li><li>• Mixer channel muted or gain too low.</li><li>• Faulty cable or connector.</li><li>• No phantom power (if using wired adapter).</li></ul>	<ul style="list-style-type: none"><li>• Ensure mini XLR connector is securely seated in the transmitter.</li><li>• Verify transmitter power and pairing status.</li><li>• Check mixer settings; unmute channel and increase gain.</li><li>• Test with a different cable or adapter if possible.</li><li>• Ensure phantom power is supplied if required.</li></ul>
Poor Sound Quality / Distortion	<ul style="list-style-type: none"><li>• Gain set too high (clipping).</li><li>• Microphone positioned too far or too close.</li><li>• Damaged microphone capsule or cable.</li></ul>	<ul style="list-style-type: none"><li>• Reduce gain on transmitter or mixer.</li><li>• Adjust microphone position to 0.5-1 inch from mouth corner.</li><li>• Inspect microphone and cable for damage.</li></ul>
Feedback Issues	<ul style="list-style-type: none"><li>• Microphone pointed towards speakers/monitors.</li><li>• Excessive gain.</li><li>• Room acoustics.</li></ul>	<ul style="list-style-type: none"><li>• Reposition microphone or speakers to avoid direct line of sight.</li><li>• Lower gain.</li><li>• Utilize the microphone's Differoid noise cancellation by ensuring proper positioning.</li></ul>
Microphone Boom Arm Not Holding Position	<ul style="list-style-type: none"><li>• Adjustment knob not tightened sufficiently.</li><li>• Worn or damaged adjustment mechanism.</li></ul>	<ul style="list-style-type: none"><li>• Ensure all adjustment knobs are securely tightened.</li><li>• If mechanism is damaged, contact AKG support for repair or replacement.</li></ul>
Foam Windscreen Falls Off Easily	<ul style="list-style-type: none"><li>• Loose fit or worn windscreen.</li></ul>	<ul style="list-style-type: none"><li>• Ensure windscreen is properly seated.</li><li>• Consider replacing with a new, snug-fitting windscreen if it continues to fall off.</li></ul>

## SPECIFICATIONS

Feature	Detail
Brand	AKG
Model Name	CM311A (AESH Shure Compatible)
Item Model Number	6000H50950
Microphone Form Factor	Headset
Polar Pattern	Unidirectional (Differoid Cardioid)
Connectivity Technology	XLR (Mini XLR for Shure compatibility)
Connector Type	Mini XLR (3-pin)
Audio Sensitivity	68 Decibels
Impedance	75 Ohms
Signal-to-Noise Ratio	78 dB
Frequency Response	20 KHz (Upper limit, full range not specified)
Item Weight	7.4 ounces (209.79 grams)
Product Dimensions (L x W x H)	12.2 x 8.2 x 4 inches (30.99 x 20.83 x 10.16 cm)
Material	Aluminum, Plastic
Color	Black
Power Source	Corded Electric (Requires phantom power)
Included Components	Microphone
Special Feature	Differoid Noise-Cancelling Technology
Compatible Devices	Amplifier, Karaoke Machine, Radio, Speaker (with appropriate Shure wireless system or adapter)

## WARRANTY INFORMATION

AKG products are covered by a manufacturer's warranty against defects in materials and workmanship. The specific duration and terms of the warranty may vary by region and product. Please retain your proof of purchase for warranty claims. For detailed warranty information, please refer to the official AKG website or contact AKG customer support.

*Note: Some customer reviews mention potential issues with warranty support in certain regions if the product is not officially sold there. It is recommended to verify warranty coverage with your local distributor or AKG directly.*

## CUSTOMER SUPPORT

For technical assistance, troubleshooting, or service inquiries regarding your AKG CM311 AESH microphone, please contact AKG customer support. You can typically find contact information, including phone numbers and email addresses, on the official AKG Pro Audio website ([www.akg.com/pro](http://www.akg.com/pro)). When contacting support, please have your product model (CM311 AESH) and serial number (if applicable) ready

to expedite the process.