C104

PROFESSIONAL LARGE DIAPHRAGM CARDIOID CONDENSER MICROPHONE

USER MANUAL

AKG®

1 SAFETY AND THE ENVIRONMENT

Risk of Damage

Please make sure that the piece of equipment your microphone will be connected to fulfills the safety regulations in force in your country and is fitted with a ground lead.

ENVIRONMENT

- At the end of the lifetime of the product, disconnect the housing, electronics and cable from each other and discard all components according to applicable disposal regulations.
- The packaging is recyclable. Dispose of the packaging via an appropriate collection system provided for this purpose.

2 DESCRIPTION

INTRODUCTION

Thank you for buying an AKG C104. Please read the user instructions carefully before using the microphone and keep them in a safe place so that you can refer to them in the future at any time. We wish you a lot of fun, and great sound!

CONTENTS

- C104 Microphone
- H81 Stand Mount

Check that the packaging contains all of the items listed. If anything is missing, please contact your AKG dealer.

SHORT DESCRIPTION

Immerse yourself in outstanding audio performance and effortless operation with the AKG C104 Large Diaphragm Cardioid Condenser Microphone. Born from a rich musical heritage and designed for today's modern content creators, it's the perfect tool for podcasters, streamers, and video producers.

Featuring a precision cardioid capsule and an optimized transformerless FET circuit, it delivers pristine sound clarity while making a striking on-screen impression.

Sustainability is built into its very design—the microphone body is crafted from 100% recycled PIR metals and alloys, and every element from packaging to accessories is engineered for minimal environmental impact.

Elevate your content with the AKG C104 Large Diaphragm Cardioid Condenser Microphone, where classic inspiration meets modern innovation.

FEATURES

- **Nickel-Sputtered Diaphragm |** The diaphragm is made of a plastic foil that is nickel-sputtered on one side only to prevent shorting to the back electrode even at extremely high sound pressure levels.
- **High Headroom, Minimum Distortion |** Capable of handling sound pressure levels up to 143dB without introducing perceptible distortion, the microphone will give excellent results in a wide range of applications.
- **Ultra-Wide Dynamic Range |** With an extremely low noise floor and high Max SPL, the C104 can clearly capture nearly any source. From loud electric guitars to the faintest whispers, you'll get a clean, detailed recording every time.
- **Environmentally Friendly Design |** The C104 microphone is thoughtfully designed and engineered to enhance sustainability. The microphone bodies are made from 100% recycled PIR metal, and the accessories are designed with sustainability as a key priority. Packaging is engineered for minimal environmental impact and is fully recyclable.

3 CONNECTING TO AUDIO EQUIPMENT

GENERAL

The Microphone uses a condenser transducer designed for 48-volt phantom powering to P48 standard and needs an external power supply (usually coming from a mixer or interface).

PHANTOM POWER (48V)

Condenser microphones are separate from dynamic microphones due to their construction and their need for phantom power. Dynamic microphones contain a diaphragm converting acoustic energy into mechanical energy, and then into electric currents. Condensers require voltage and current to power their internal amplifiers. They are often more sensitive and produce a higher output than their dynamic counterparts.

PINOUT

The microphone provides a balanced output on a 3-pin male XLR connector:

- Pin 1: ground
- Pin 2: hot
- Pin 3: cold

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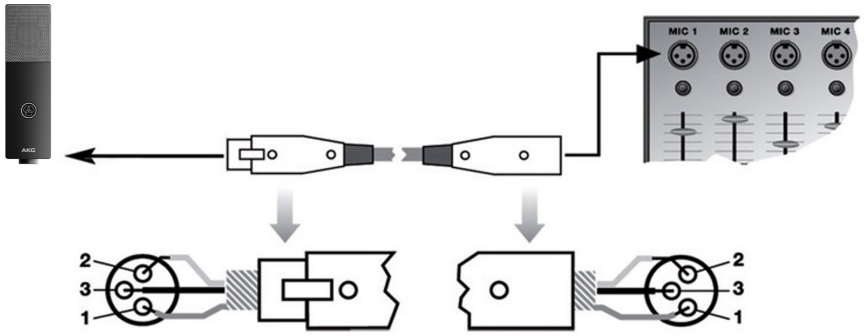


Figure 1: Connecting to a balanced input with phantom power

CONNECTING THE MICROPHONE

1. Use an XLR cable to connect the microphone to a balanced XLR input with phantom power.
2. Switch the phantom power on. (Refer to the user manual of the unit to which you connected your microphone.)

4 OPERATION

OPERATING INSTRUCTIONS

The C104 is a general-purpose microphone for recording, podcasting, streaming, and on-stage use.

Every instrument radiates sound in a specific way. Therefore, to get the best sound it is crucial to experiment with microphone placement.

- The front of the microphone is the side of the body with the AKG logo on it. Therefore, always aim the logo side at the sound source you are going to record. Being a cardioid microphone, the C104 picks up very little sound from the rear.
- When recording wind instruments or vocals, make sure not to blow or sing directly into the microphone. To avoid unwanted wind, pop noise, or moisture problems, place a pop screen between the microphone and the vocalist/instrument.
- Keep the microphone dry. Moisture from blowing or singing directly at the capsule from a short distance, or extremely high humidity may cause the microphone to start crackling or go very quiet due to partial short circuits in the polarization voltage.

RECORDING TIPS AND TRICKS

Your C104 has been developed to ensure that in every setting it is used in, it will perform to excellence. However, it is important to understand that there are variables while recording that could impact the quality. Luckily, these are controllable. Here are some to consider:

- **Placement and Proximity |** Where the mic is placed and the distance from the recorded subject might be the most influential aspect of recording. Let your creative mind run wild and utilize placement and proximity to your advantage. Want a clean, warm, and full recording? Make sure your mic is placed close to your subject. For a distant echo, place your microphone at the opposite end of your room from your subject.
- **Setting and Room Noise |** Every room sounds different, and room tone can provide variety across recordings. It is important to remember that your C104 will pick up noise separate from your intended source. This can be room tone, but any number of things found in our noisy world. Try to focus on the goal of your recording and use your judgement on where you should record.

- **Mic Handling |** The C104 is a very sensitive microphone. Whether it be loud breaths or unforeseen dynamic changes, you will notice the effects more on a condenser microphone. With that being said, your C104 will be sensitive to bumps, drops, or hits during recording. We suggest mounting it with your supplied shock mount to ensure the cleanest recording possible.

Keep in mind that these are suggestions. The audio world is your oyster and the C104 is here to help you in whatever endeavor you may choose.

APPLICATION

1. **Voice |** Place the mic 3-8 centimeters away from the subject. There is a direct correlation between low frequency pick-up and proximity. The closer you record someone; lower frequencies will be more pronounced. Try to define a relative distance the speaker will remain throughout the recording to keep these frequencies consistent.
2. **Acoustic Guitar |** Place the microphone 15 centimeters away from the guitar. The placement of the microphone creates a wide variation with acoustic guitars. For a general, quality sound place the microphone at the bottom of the neck next to the resonant hole. For a bright, high-end boosted sound, move up the neck.
3. **Amplifiers |** Place the mic 3-15 centimeters away from the amplifier. Locate one of the cones of the speaker and place the microphone 5 centimeters off-center of the cone.
4. **Drums |** The C104 performs best when recording overhead, toms, or room. When recording overhead, place the mic ~1 meter above the kit and angle the front downward.

5 CLEANING

- Use a soft cloth moistened with water to clean the surface of the microphone body.

6 TROUBLESHOOTING

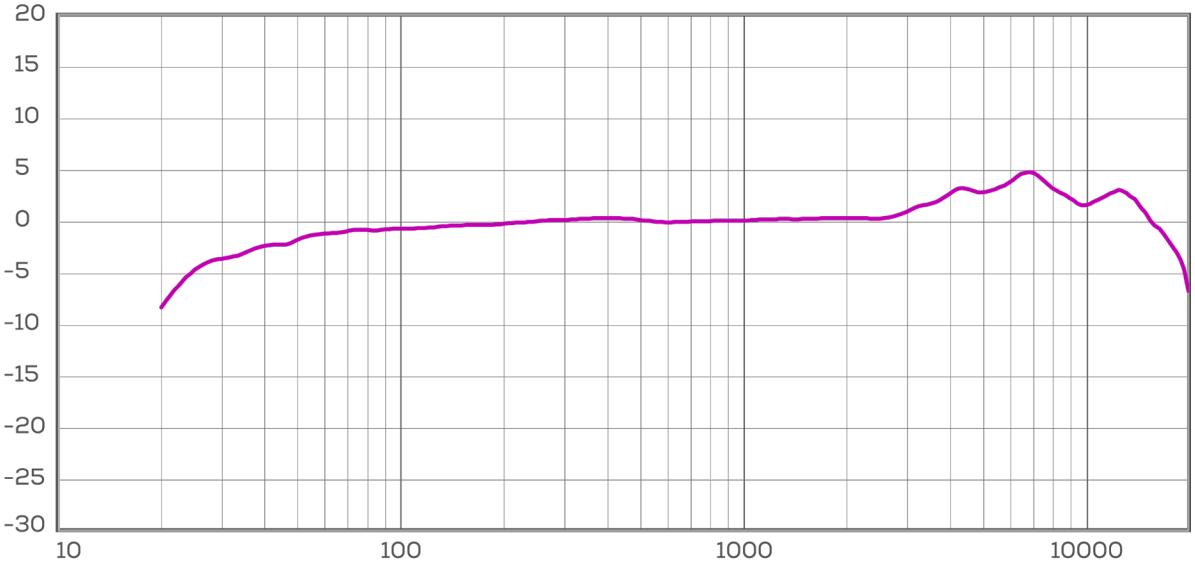
PROBLEM	POSSIBLE CAUSE	REMEDY
No Sound	Power to mixer, interface, and/or amplifier is off.	Switch power to mixer, interface, or amplifier on.
	Channel or master fader on mixer or volume control on preamp is at zero.	Set channel or master fader on mixer or gain control on preamp to desired level.
	Microphone is not connected to mixer/interface/amplifier.	Connect the microphone to mixer/interface/amplifier.
	Cable connectors are seated loosely.	Check cable connectors for secure seat.
	Cable is defective.	Check cable and replace if damaged.
	No supply voltage.	Switch phantom power on. Phantom power supply: connect to power outlet or insert batteries. Check cable and replace if necessary.
Distortion	Channel gain control on preamp set too high.	Turn gain control down CCW.
	Microphone too close to sound source.	Move microphone further away from sound source.
Crackling noises or low output	Partial short circuits due to excessive humidity.	Place microphone in warm, dry room and allow to dry.

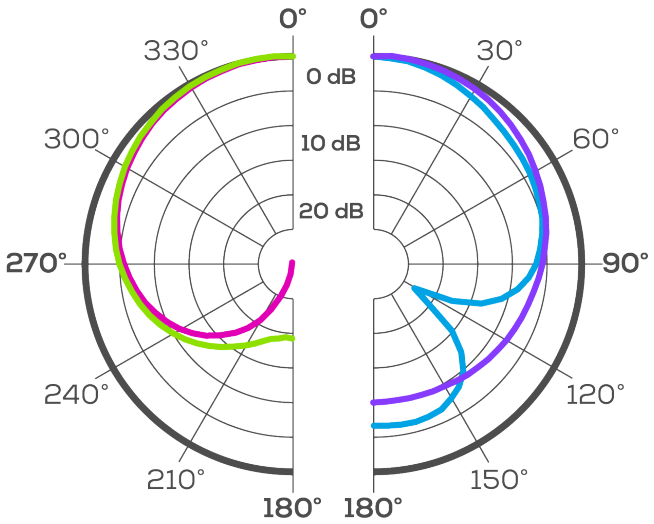
7 TECHNICAL DATA

SPECIFICATION SHEET

Capsule Type:	22mm Electret Condenser Diaphragm
Polar Pattern:	Cardioid
Sensitivity:	13.5mV/Pa (-37.5 dBV)
Frequency Response:	20Hz - 20kHz (see frequency response trace)
Electrical Impedance:	≤200 ohms
Recommended load impedance:	≥1000 ohms
Self-Noise Level:	14dB(A) SPL
Signal to Noise:	80dB re 1 Pa
Max SPL for 0.5% THD	143dB SPL
Temperature Range:	-5 to 50 °C (23 to 122 °F)
Phantom Powering:	48V +/- 4V to IEC 61938
Current Consumption:	≤5 mA
Connector:	3-pin XLR (pin 2 hot)
Length:	158mm
Width:	47mm
Height:	35mm
Product weight:	375g

C104 CARDIOID FREQUENCY RESPONSE





C104 CARDIOID

1kHz
8kHz
250Hz
4kHz

HARMAN

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