

AKG ACOUSTICS

PERCEPTION 100 PERCEPTION 200

User Instructions

Please read the manual before using the equipment!





1 Precaution/Unpacking

1.1 Precaution

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.

1.2 Unpacking

Check that the packaging contains all of the items listed for your microphone. Should any item be missing, please contact your AKG dealer.

PERCEPTION 100:

- Microphone
- Stand adapter
- Mini poster

PERCEPTION 200:

- Microphone
- Spider suspension
- Carrying case
- Mini poster



2 Description

2.1 Introduction

Thank you for purchasing an AKG product. This Manual contains important instructions for setting up and operating your equipment. Please take a few minutes to **read the instructions below carefully before operating the equipment** and keep the Manual for future reference. Have fun and impress your audience!

The **PERCEPTION 100** and **PERCEPTION 200** are heavy-duty, rugged true condenser microphones built to the same strict quality standards as all other AKG products.

Designed on the basis of AKG's decades of know-how and feedback from sound engineers around the world using AKG studio microphones every day, these general-purpose 1-inch large-diaphragm microphones bring AKG studio quality to

the worlds of recording, live sound, and broadcasting.

2.2 Common Features

The **PERCEPTION 100** and **200** share the following features:

- **Cardioid polar pattern:** The microphone is most sensitive to sounds arriving from in front of it while picking up much less of sounds arriving from the sides or rear (from monitor speakers or neighboring instruments). This makes the microphone equally suited for recording and onstage use.
- **Gold-sputtered diaphragm:** The diaphragm is made of a plastic foil that is gold-sputtered on one side only to prevent shorting to the back electrode even at extremely high sound pressure levels.

- **All-metal body:** The all-metal body adds to the rejection of RF interference so you can use the microphone near transmitter stations and along with wireless microphones or other communications equipment. The extremely rugged, heavy body and sturdy front grill protect the microphone from damage from tough handling on stage.
- **High headroom, minimum distortion:** Capable of handling sound pressure levels up to 135 dB without introducing perceptible distortion and built to resist high temperatures and humidity, the microphone will give excellent results in a wide range of applications.

2.3 PERCEPTION 200 Added Features

The **PERCEPTION 200** is basically identical to the **PERCEPTION 100** but provides

the following additional features:

- **Bass cut filter:** Selector 1 on the microphone front (refer to fig. 1) further reduces low-end distortion caused by footfall or wind noise, etc. The filter also minimizes the proximity effect that close-in miking from less than 4 inches causes in any unidirectional microphone. The filter rolls off at 12 dB/octave from 300 Hz downward.
- **Switchable preattenuation pad:** Selector 2 on the microphone front (refer to fig. 1) lets you increase the headroom by 10 dB for distortion-free close-in recording. The preattenuation pad prevents the microphone's output level, particularly at low frequencies, from overloading the miniature transformers used in many mixer input stages, etc.



Fig. 1: Bass cut and preattenuation switches on **PERCEPTION 200** front.

2.4 Optional Accessories

- **MK 9/10** 10-m (30-ft.) 2-conductor shielded cable with male and female XLR connectors
- **N 62, N 66 AC** phantom power supplies
- **B 18 + A 48V** battery supply and DC/DC converter for 48-V phantom powering
- **PF 100** studio pop screen
- **ST 102A, ST 200, ST 305** floor stands
- **W 4000** external windscreen



3 Interfacing

3.1 General

Section 3 applies to both the **PERCEPTION 100** and the **PERCEPTION 200**. The microphone uses a true condenser transducer designed for 48-volt phantom powering to DIN 45 596/IEC 268-15.

Neither the diaphragm nor the backplate are permanently polarized, so the microphone needs an external power supply. The microphone provides a balanced output on a 3-pin male XLR connector:

Pin 1: ground

Pin 2: hot

Pin 3: return

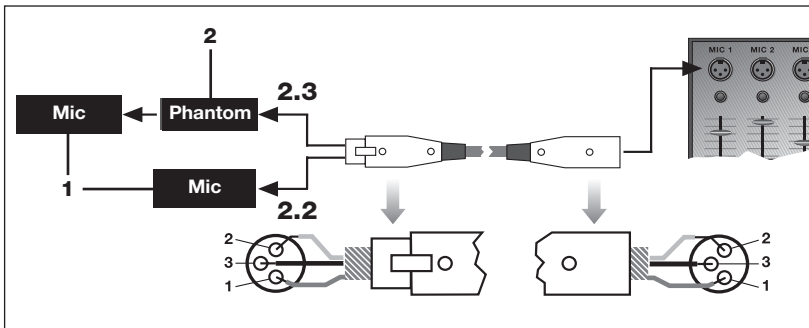


Fig. 2: Connecting to a balanced input with (2.2) or without (2.3) phantom power.

You can connect the microphone either to a balanced microphone input with or without phantom power or an unbalanced microphone input.

3.2 Input with Phantom Power

Refer to fig. 2.

1. Use an XLR cable (e.g., the optional MK 9/10 from AKG) to connect the microphone (1) 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.)

3.3 Input with No Phantom Power

Refer to fig. 2.

1. If your mixer provides no phantom power, connect an optional AKG phantom power supply (N 62, N 66, B 18 + A 48V) between the microphone and the mixer.

Important: Using any power supply other than those recommended by AKG may damage your microphone and will void the warranty.

3.4 Unbalanced Input

Refer to fig. 3.

Use a cable with a female XLR connector

and TS jack plug:

1. On the XLR connector, use a wire bridge to connect pin 1 to pin 3 and the cable shield.
2. Connect the inside wire of the cable to pin 2 on the XLR connector and the tip contact of the jack plug.

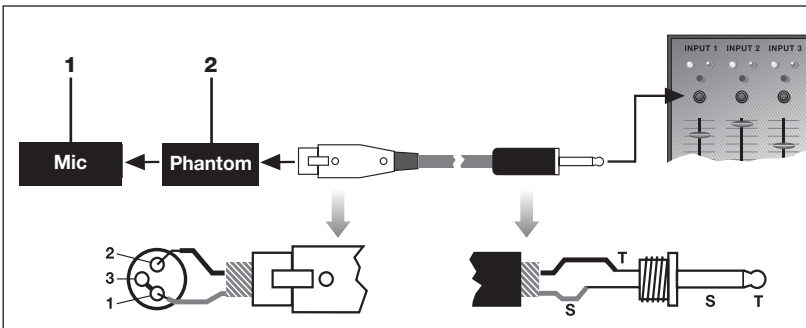


Fig. 3: Connecting to an unbalanced input.

Note: Unbalanced cables may pick up interference from stray magnetic fields near power or lighting cables, electric motors, etc. like an antenna. This may introduce hum or similar noise when you use a cable that is longer than 16 feet (5 m).



4 Using Your Microphone

4.1 General Hints

The **PERCEPTION 100** and **PERCEPTION 200** are general-purpose cardioid microphones for recording, broadcast, and onstage use.

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

The following hints apply to both the **PERCEPTION 100** and **PERCEPTION 200**.

- The **front** of the microphone is the side of the body with the **AKG logo** on it. Therefore, always aim the logo at the sound source you are going to record!

Being a unidirectional (cardioid) microphone, the **PERCEPTION** will pick up very little sound from the rear.



Fig. 4: Microphone front.

- When recording wind instruments or vocals, make sure **not to blow or sing directly into the microphone**. To avoid unwanted wind and pop noise or moisture problems, place an optional PF 100 pop screen from AKG between the microphone and 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.
 - If you use the microphone **in the open air**, use an optional AKG **W 4000 windscreen** to protect the microphone from moisture and reduce wind noise.
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4.2 PERCEPTION 200

- **High volume instruments:** You can use this microphone for close-in recording of very loud instruments (brass instruments, kick drum, etc.). Just switch the preattenuation pad in to increase the microphone's capability of handling sound pressure levels to 145 dB.
 - **Low-frequency noise:** To suppress low-frequency noise such as air conditioning rumble, footfall noise, or traffic sounds, switch the bass cut filter in.
-



5 Cleaning

To clean the surface of the microphone body, use a soft cloth moistened with water.



6 Troubleshooting

Problem	Possible Cause	Remedy
No sound.	<ol style="list-style-type: none">1. Power to mixer and/or amplifier is off.2. Channel or master fader on mixer, or volume control on amplifier is at zero.3. Microphone is not connected to mixer or amplifier.4. Cable connectors are seated loosely.5. Cable is defective.6. No supply voltage.	<ol style="list-style-type: none">1. Switch power to mixer or amplifier on.2. Set channel or master fader on mixer or volume control on amplifier to desired level.3. Connect microphone to mixer or amplifier.4. Check cable connectors for secure seat.5. Check cable and replace if damaged.6. Switch phantom power on. Phantom power supply: connect to power outlet or insert battery (batteries). Check cable and replace if necessary.
Distortion.	<ol style="list-style-type: none">1. Channel gain control on mixer set too high.	<ol style="list-style-type: none">1. Turn gain control down CCW.

6 Troubleshooting



Problem	Possible Cause	Remedy
(Distortion)	2. Microphone too close to sound source.	2. Move microphone further away from sound source. (PERCEPTION 200 only:) Switch preattenuation pad in.
Crackling noises or low output.	<ul style="list-style-type: none">• Partial short circuits due to excessive humidity.	<ul style="list-style-type: none">• Place microphone in warm, dry room and allow to dry.



7 Specifications

7.1 PERCEPTION 100 and PERCEPTION 200

Type:	1-inch large-diaphragm, true condenser pressure-gradient microphone
Polar pattern:	cardioid
Open-circuit sensitivity:	18 mV/Pa (-35 dBV)
Frequency range:	20 Hz to 20 kHz (see frequency response trace)
Impedance:	≥ 200 ohms
Recommended load impedance:	≥ 1000 ohms
Equivalent noise level to CCIR 468-2:	26 dB
Equivalent noise level to IEC 60268-4 (A-weighted):	16 dB-A
Signal/noise ratio re 1 Pa (A-weighted):	78 dB
Max. SPL for 0.5% THD:	135 / 145 dB SPL (0 / -10 dB)
Environment:	temperature: -10°C to +60°C R.H.: 80% (+25°C)

Powering:	48 V ±5 V phantom power to DIN 45 596 / 268-15IEC
Current consumption:	≤2 mA
Connector:	3-pin XLR (pin 2 hot)
Dimensions:	53 dia. x 160 mm high / 2 x 6.3 in.
Net weight:	525 g / 1.2 lbs.

7.2 PERCEPTION 200 only

Bass cut filter slope:	12 dB/octave, 300 Hz
Preattenuation pad:	-10 dB (switchable)

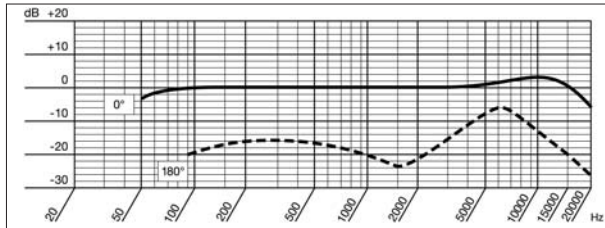
FCC Statement

The device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

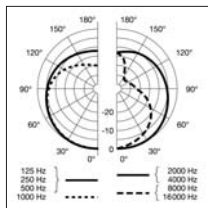
- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.



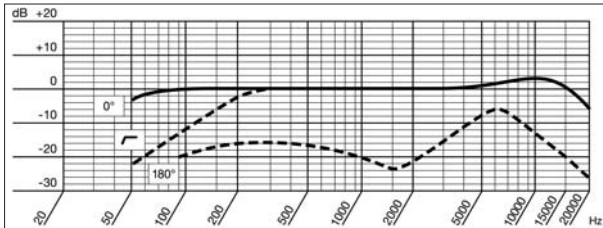
PERCEPTION 100 Frequency Response



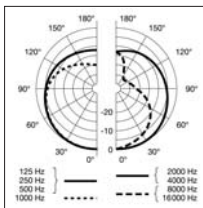
PERCEPTION 100 Polar Diagram



PERCEPTION 200 Frequency Response



PERCEPTION 200 Polar Diagram





The International Page

English

This product conforms to the standards listed in the Declaration of Conformity. To order a free copy of the Declaration of Conformity, visit <http://www.akg.com> or contact sales@akg.com

Deutsch

Dieses Produkt entspricht den in der Konformitätserklärung angegebenen Normen. Sie können die Konformitätserklärung auf <http://www.akg.com> oder per E-Mail an sales@akg.com anfordern.

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AKG Acoustics GmbH

Lemböckgasse 21–25, P.O.B. 158, A-1230 Vienna/AUSTRIA, Tel: (+43 1) 86 654-0*, Fax: (+43 1) 86 654-7516, www.akg.com, e-mail: sales@akg.com,
Hotline: (+43 676) 83200 888, hotline@akg.com

H A Harman International Company

AKG Acoustics GmbH

Bodenseestraße 228, D-81243 München/GERMANY, Tel: (+49 89) 87 16-0, Fax: (+49 89) 87 16-200, www.akg.com/de, e-mail: infode@akg.com,
Hotline: (+49 89) 87 16-22 50, hotlinede@akg.com

AKG ACOUSTICS, U.S.

914 Airpark Center Drive, Nashville, TN 37217, U.S.A., Tel: (+1 615) 620-3800, Fax: (+1 615) 620-3875, www.akgusa.com, e-mail: akgusa@harman.com

For other products and distributors worldwide see our website: www.akg.com