



AKG D7 Reference Dynamic Vocal Microphone Instruction Manual

[Home](#) » [AKG](#) » **AKG D7 Reference Dynamic Vocal Microphone Instruction Manual** 

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Contents

1 Precaution/Description

1.1 Precaution

1.2 Unpacking

1.3 Optional Accessories

1.4 Features

2 Description

3 Using your microphone

3.1 Introduction

3.2 Working Distance and Proximity Effect

3.3 Angle of Incidence

4 Using your microphone

4.1 Backing Vocals

5 Cleaning

5.1 Cleaning the Internal Windscreen

5.2 Replacing the Internal Windscreen

6 Troubleshooting

7 Frequency Response

8 Polar Diagram

9 Documents / Resources

9.1 References

10 Related Posts

Precaution/Description

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.

Unpacking

				
1 D 7 / D 7 S / D 7 L TD	1 SA 61	1 Extra internal wind screen	1 Carrying case	1 Microfiber cloth (D 7 LTD only)

- Check that the packaging contains all of the components listed above. Should anything be missing, please contact your AKG dealer.

Optional Accessories

- For optional accessories, refer to the current AKG catalog or folder, or visit www.akg.com. Your dealer will be glad to help.

Features

- Frequency response optimized for vocal use.
- Integrated wind and pop screen for effective suppression of pop and breath noise.
- Frequency independent supercardioid polar pattern for high gain before feedback.
- New Varimotion diaphragm for brilliant sound.
- Mechanical/pneumatic transducer shock mount reduces handling and cable noise.
- Highpass filter and humbucking coil minimize low-frequency noise
- Extremely resilient, spring-steel wire-mesh cap for extra impact resistance.

Description

The AKG D 7 is a super cardioid dynamic microphone. It has been designed specifically as a vocal microphone for rough onstage use. The wide frequency response of the D 7 slightly favors the midfrequency and treble regions to ensures good intelligibility of speech. The term “super cardioid polar response” means that the D 7 is most sensitive to sound arriving from in front of it, less sensitive to sound arriving from the sides and rear. This pickup pattern is virtually the same for all frequencies or, in other words, from the lowest to the highest notes (“frequency independent”).

A mechanical/pneumatic shock mount on the transducer element minimizes handling and cable noise. An integrated windscreen reduces pop, wind, and breath noise to a minimum. A built-in humbucking coil and 80-Hz highpass filter will effectively suppress any other kind of unwanted low-frequency noise. The filter is permanently active. Therefore, the microphone has no separate on/off switch for the highpass filter. A rugged front grill made of spring-steel wire mesh that is extremely resistant to deformation and a sturdy zinc alloy die-cast body effectively protect the microphone and transducer element from damage on stage and on the road.

The D 7 S has the same mechanical, electrical, and acoustic characteristics as the D 7 and features a noiseless on/off switch.

The D 7 LTD has the same mechanical, electrical, and acoustic characteristics as the D 7 and boasts a chrome-plated case to satisfy specail esthetic requirements.

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

Pin 1: ground

Pin 2: hot

Pin 3: return

You can connect the microphone either to a balanced or an unbalanced microphone input.

- To connect the microphone to a balanced input (XLR connector), use a commercial XLR cable.
- To connect the microphone to an unbalanced microphone input (1/4" jack), use a cable with a female XLR connector and a 1/4" TS jack plug.
- Please note that unbalanced cables may pick up interference from stray magnetic fields near power or lighting cables, electric motors, etc. like an antenna. This may cause hum or similar noise when you use a cable that is longer than 16 feet (5 m).

Using your microphone

Introduction

A handheld vocal microphone provides many ways of shaping the sound of your voice as it is heard over the sound system. The following sections contain useful hints on how to use your microphone for best results.

Working Distance and Proximity Effect

Basically, your voice will sound the bigger and mellower, the closer you hold the microphone to your lips. Moving away from the microphone will produce a more reverberant, more distant sound as the microphone will pick more of the room's reverberation. You can use this effect to make your voice sound aggressive, neutral, insinuating, etc. simply by changing your working distance.

Proximity effect is a more or less dramatic boost of low frequencies that occurs when you sing into the microphone from less than 2 inches. It gives more “body” to your voice and an intimate, bass-heavy sound.

Angle of Incidence

Refer to fig. 1

Fig. 1: Typical microphone position.



If you sing directly into the microphone, it will not only pick up excessive breath noise but also overemphasize “sss”, “sh”, “tch”, “p”, and “t” sounds.

- Therefore, sing to one side of the microphone or above and across the microphone's top. This provides a well-balanced, natural sound.

Using your microphone

Feedback

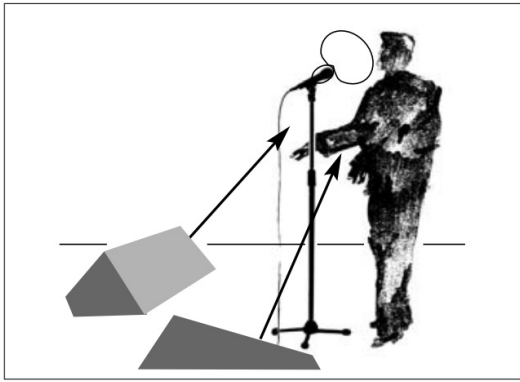


Fig. 2: Microphone placement for maximum gain before feedback.

The term “feedback” means that part of the sound projected by a speaker is picked up by a microphone, fed back to the amplifier, and projected again by the speaker. Above a specific volume or “system gain” setting the sound system will start howling and the sound engineer will desperately dive for the master fader to reduce the volume and stop the howling. To increase usable gain before feedback, the microphone has a

supercardioid polar pattern. It is most sensitive to sounds arriving from in front of it (your voice) while picking up much less of sounds arriving from the sides or rear (from monitor speakers for instance).

To maximize gain before feedback, place the main (“FOH”) speakers in front of the microphones (along the front edge of the stage).

If you use monitor speakers, be sure never to point any microphone directly at a monitor or FOH speaker. Feedback may also be triggered by resonances depending on the acoustics of the room or hall. With resonances at low frequencies, proximity effect may cause feedback. In this case, it is often enough to move away from the microphone a little to stop the feedback.

Backing Vocals



1. Never let more than two persons share a microphone.
2. The microphone is very insensitive to off-axis sounds. If the two vocalists were to sing into the microphone from an angle wider than 35 degrees, you may end up bringing up the fader of the microphone channel far enough to create a feedback problem.

Cleaning

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

Cleaning the Internal Windscreen

Dust, moisture, lipstick, etc. may gradually turn the windscreen inside the front grill into a “high-frequency trap” making the microphone sound dull. We therefore recommend cleaning the internal windscreen as soon as the microphone sound begins to lose its sparkle and clarity.

1. Unscrew the front grill from the microphone CCW.
2. Remove the internal windscreen from the front grill.
3. Soak the internal windscreen in soap suds and squeeze out the suds again. Repeat three or four times.
4. Allow the internal windscreen to dry overnight.
5. Insert the cleaned internal windscreen into the front grill.
6. Screw the front grill on the microphone CW.

Replacing the Internal Windscreen

Should the sound remain dull even after cleaning the windscreen, you can replace the original internal windscreen with the extra windscreen supplied with the microphone:

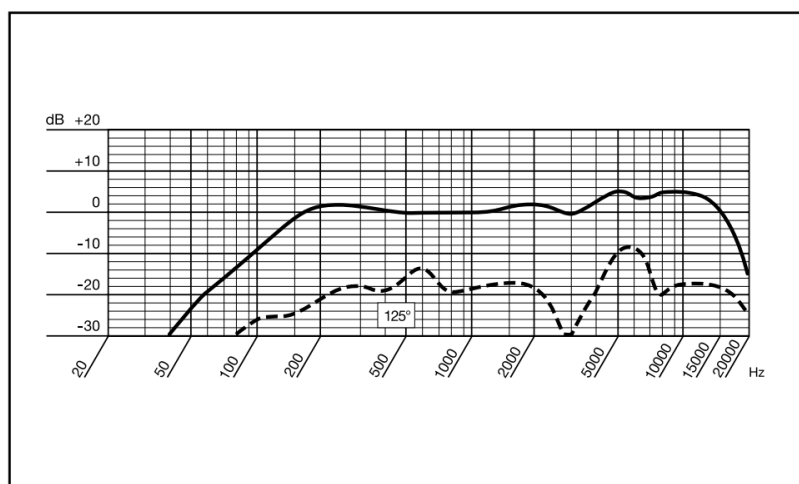
1. Unscrew the front grill from the microphone CCW.
2. Remove the internal windscreen from the front grill.
3. Wet the extra windscreen with a few drops of water and squeeze the windscreen a couple of times, to the point that it assumes the correct shape.
4. Allow the extra windscreen to dry.
5. Insert the extra windscreen into the front grill.
6. Screw the front grill on the microphone CW.

Troubleshooting

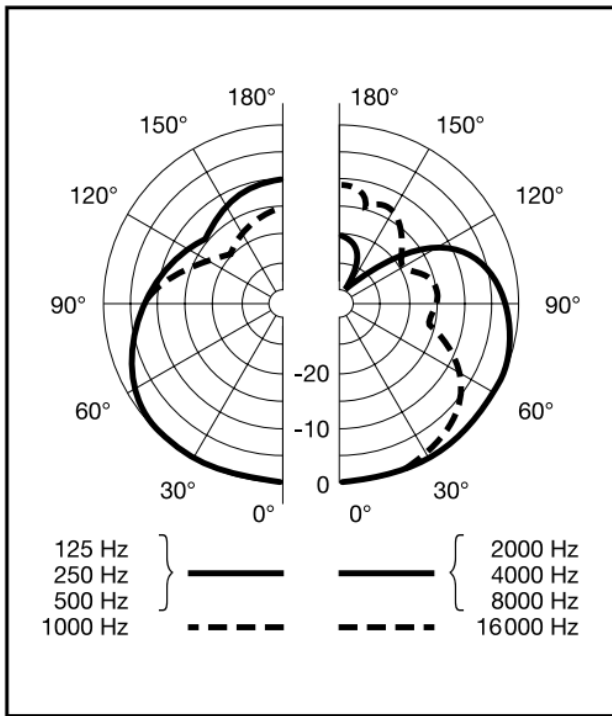
Problem	Possible Cause	Remedy
No sound.	<ol style="list-style-type: none"> 1. Power to mixer and/or amplifier is off. 2. Channel or master fader on mixer, or volume control on amplifier is at zero. 3. Microphone is not connected to mixer or amplifier. 4. Cable connectors are seated loosely. 5. Cable is defective. 	<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.
Distortion.	<ol style="list-style-type: none"> 1. Gain control on mixer or transmitter module not set correctly. 2. Mixer input sensitivity too high. 	<ol style="list-style-type: none"> 1. Set gain control to stop distortion. 2. insert 10 dB preattention pad between microphone cable and input.
Microphone sound becomes duller by and by	<ul style="list-style-type: none"> • Internal or external windscreen attenuates high frequencies when soiled. 	<ul style="list-style-type: none"> • Clean or replace internal or external windscreen.

Polar pattern:	supercardioid
Frequency range:	70 Hz to 20 kHz
Highpass filter	80 Hz, permanently on
Sensitivity:	2.6 mV/Pa (-52 dBV re 1 V/Pa)
Max. SPL for 1% / 3% THD:	147 / 156 dB SPL
Equivalent noise level:	18 dB(A) to IEC 60268-4
Impedance:	600 ohms
Recommended load impedance:	2000 ohms
Humbucking coil:	integrated
Connector:	3-pin XLR
Finish:	D 7, D 7 S: matte gray-blue; D 7 LTD: chrome plated
Size:	length: 185.2 mm (7.3 in.); diameter: 51 mm (2 in.)
Net weight:	340 g (12 oz.)
Shipping weight:	655 g (1.45 lbs.)
Patents:	Varimotion varying-thickness diaphragm for dynamic transducers (patents nos. AT 403.751, US 6.185.809, DE 814.637, DK 814.637, FI 814.637, FR 814.637, GB 814.637, IT 814.637, NL 814.637)
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 .	


Frequency Response





Polar Diagram



Documents / Resources

 <p>D7 D7 S D7 LTD VOCAL</p>	<p>AKG D7 Reference Dynamic Vocal Microphone [pdf] Instruction Manual D7, D7 S, D7 LTD, D7 Reference Dynamic Vocal Microphone, Reference Dynamic Vocal Microphone, Dynamic Vocal Microphone, Vocal Microphone, Microphone</p>
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References

-  [Official AKG Store](#) "Microphones, Headphones, and More!"
-  [Search - Manual-Hub.com](#)

