

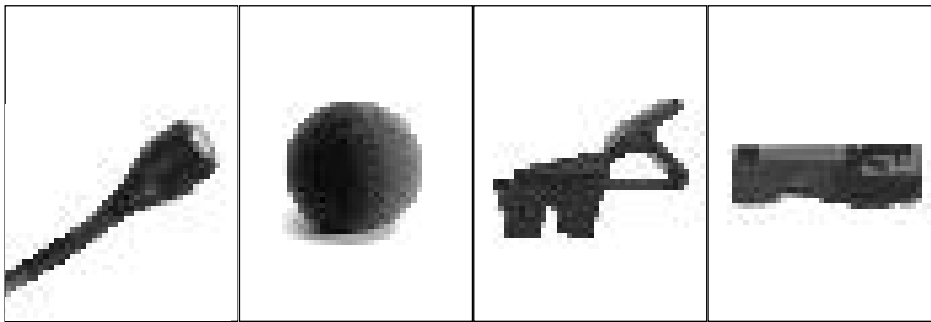
1 Precaution/Description



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.

1.1 Precaution

1.2 Unpacking



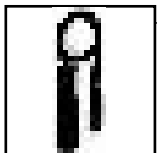
1 C 417^{III} 1 W 407 1 H 40/1 1 H 41

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

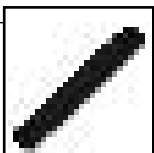
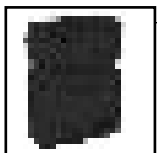
1.3 Optional Accessories



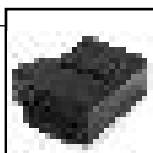
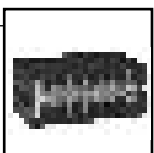
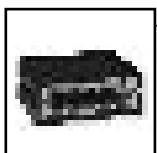
- **MK 9/10** microphone cable: 10-m (30-ft.) 2-conductor shielded cable w/male and female XLR connectors



- **MPA III L** phantom power adapter



- **B 29 L, B 15** battery power supplies



- **N 62 E, N 66 E, B 18** phantom power supplies

1.4 Features

- Professional miniature clip-on microphone.
- Omnidirectional condenser transducer for natural sound.
- Extended frequency response for clear reproduction of speech, vocals, violin.



1 Description

- Fastens on clothing or directly on the user's head.
-

1.5 Brief Description

The C 417^{III} is a professional miniature condenser clip-on microphone with an omnidirectional polar pattern. With its wide frequency range extending from 20 Hz to 20 kHz, low distortion at high sound pressure levels, small size, and useful accessories, the C 417^{III} is an ideal choice for use in any situation requiring an inconspicuous microphone and maximum mobility for the user.

The microphone is available in two different colors and will almost disappear when blended in with an actor's or singer's makeup.

An external windscreen supplied with the microphone reduces wind noise when using the microphone on an open-air stage.

1.6 Versions

C 417^{III} PP:

The C 417^{III} is available in three versions:

- With 3-pin XLR connector with integrated adapter for 9 to 52 V universal phantom power.

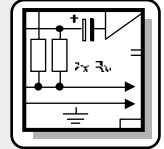
C 417^{III} L:

- With locking mini XLR connector for use with the B 29 L battery power supply, MPA III L phantom power adapter, or AKG bodypack transmitters.

C 417^{III} PL:

- Identical to the C 417^{III} L, except with flesh-color cable and microphone body.
-

2 Interfacing



The C 417^{III} is a condenser microphone and therefore needs a power supply.

2.1 Introduction

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

Important!

1. Connect the phantom power adapter (1) on the microphone cable to a balanced XLR microphone input with phantom power.
2. Switch the phantom power on. (Refer to the instruction manual of the unit to which you connected your microphone.)

2.2 C 417^{III} PP 2.2.1 Connecting to Balanced Inputs

Refer to fig. 1.

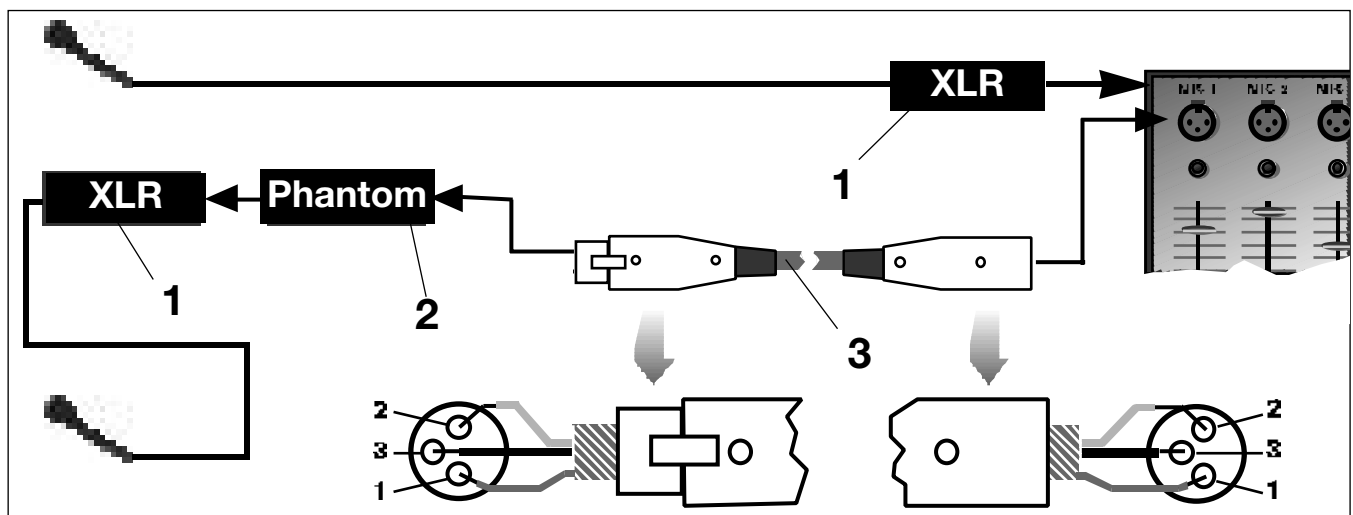


Fig. 1: Connecting to a balanced input.

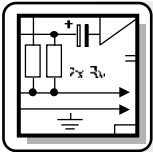
3. **If your mixer provides no phantom power:** Connect the phantom power adapter (1) to an optional AKG phantom power supply (2) (N 62 E, N 66 E, B 18, B 15) and use an XLR cable (3) (e.g., an optional MK 9/10 from AKG) to connect the phantom power supply to the desired balanced input.

Refer to fig. 1.

You may connect any AKG phantom power supply (2) to an unbalanced input, too. Use a cable (3) with a female XLR connector and TS jack plug:

2.2.2 Connecting to Unbalanced Inputs

Refer to fig. 2.



2 Interfacing

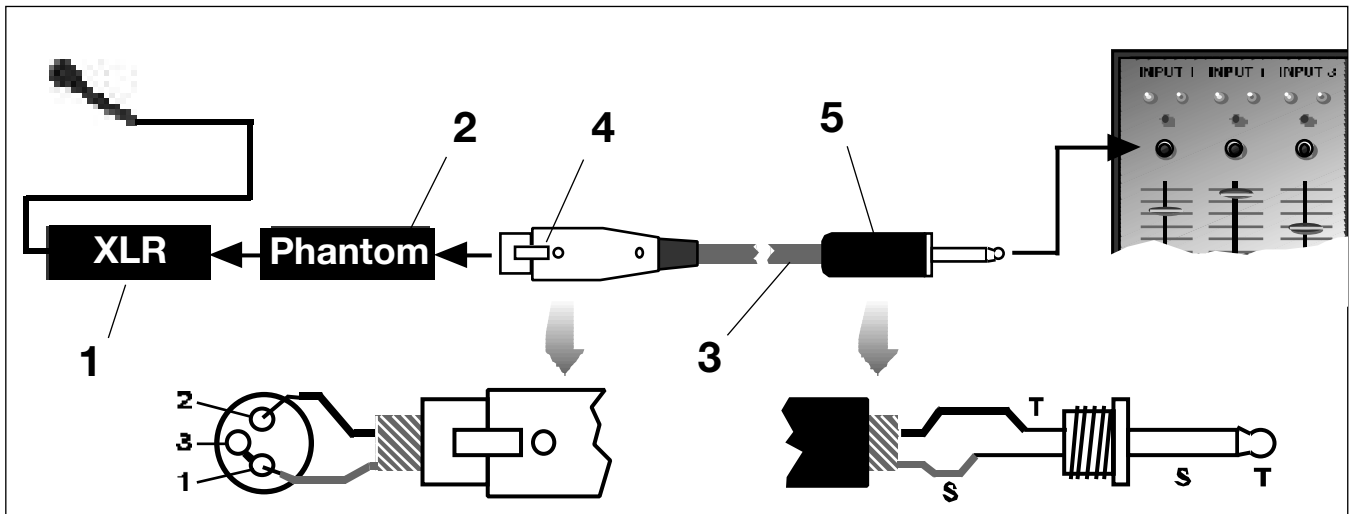


Fig. 2: Connecting to an unbalanced input.

1. On the XLR connector (4), add 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 (4) and the tip contact of the jack plug (5).

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).

2.3 C 417^{III} L/PL

2.3.1 Using the Optional B 29 L

Refer to fig. 3.

Connecting the cable:

1. Push the mini XLR connector (1) on the microphone cable into one of the two mini XLR sockets on the B 29 L (2) to the stop. The connector will lock automatically.

Disconnecting the cable:

To disconnect the cable, press the unlocking button on the mini XLR connector (1) and pull the connector (1) out of the socket.

2 Interfacing

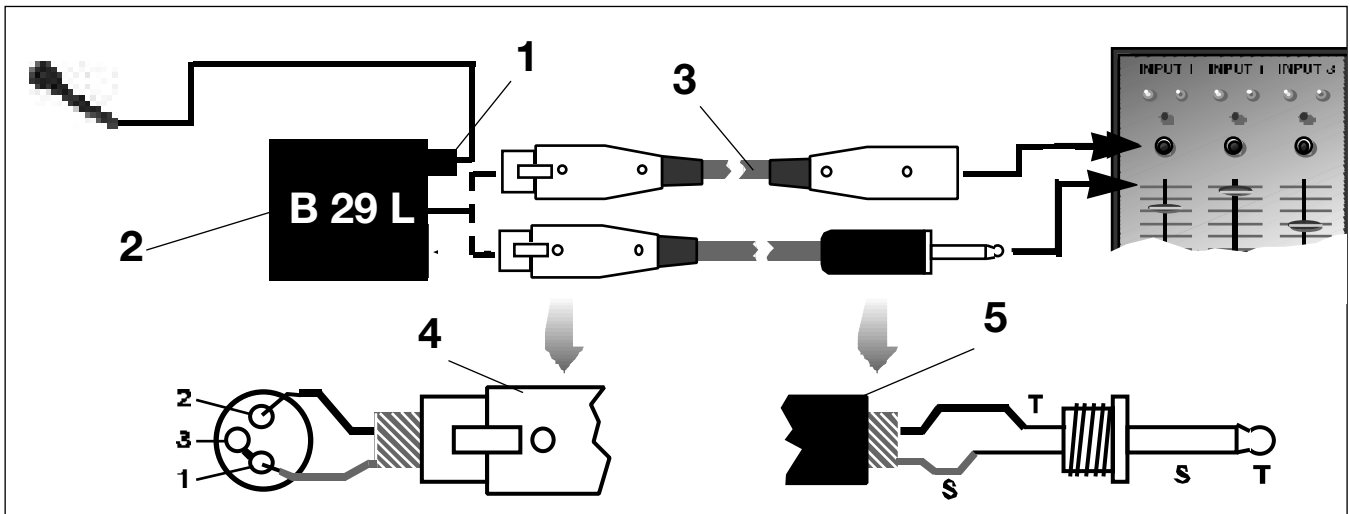
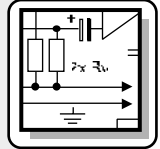


Fig. 3: Using the B 29 L to power the microphone.

To avoid damaging the cable, never try to pull out the cable itself!

Important!

2. Connect the B 29 L (2) to the desired input.

Refer to fig. 3.

- Use a commercial XLR cable (3) to connect the B 29 L (2) to a balanced input.
- Refer to section 2.2.2 above.

Balanced input:

Unbalanced input:

1. Push the mini XLR connector (1) on the microphone cable into the mini XLR socket (2) on the cable of the MPA III L (3) to the stop. The connector will lock automatically.

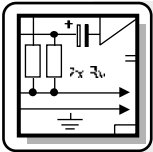
2.3.2 Using the MPA III L

Refer to fig. 4.

Refer to section 2.3.1 above.

Disconnecting the cable:

2. Connect the MPA III L (3) to a balanced XLR microphone input with phantom power.
3. Switch the phantom power on. (Refer to the instruction manual of the unit to which you connected your microphone.)



2 Interfacing

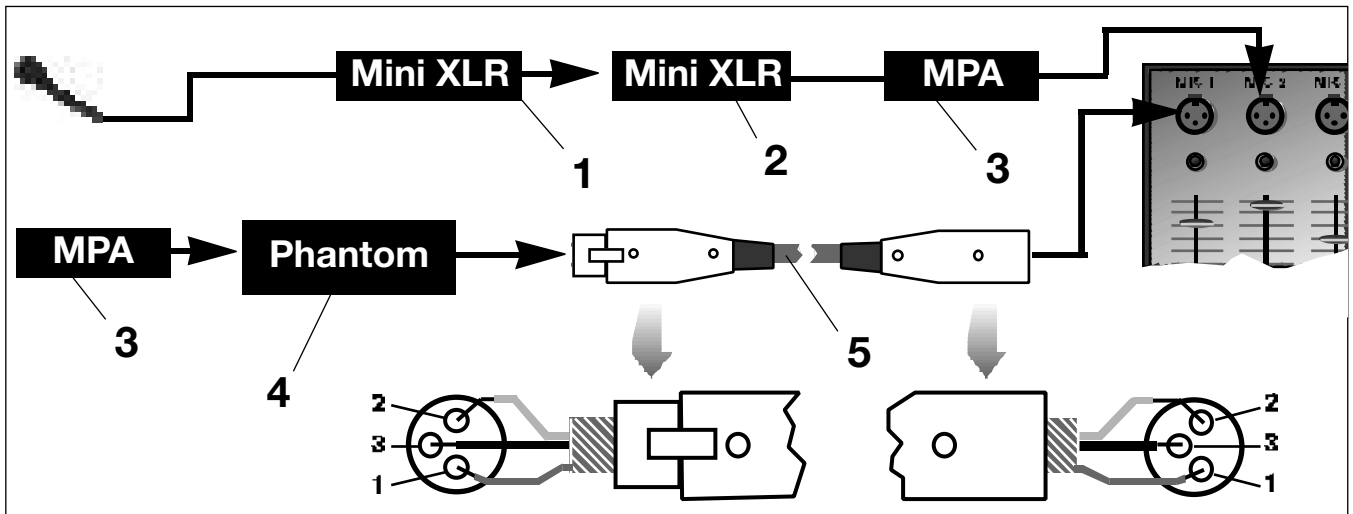


Fig. 4: Connection diagram with MPA III L.

- Refer to fig. 4. 4. **If your mixer provides no phantom power:** Connect the MPA III L (3) to an optional AKG phantom power supply (4) (N 62 E, N 66 E, B 18, B 15) and use an XLR cable (5) (e.g., an optional MK 9/10 from AKG) to connect the phantom power supply (4) to the desired balanced input.

2.3.3 Connecting to a Bodypack Transmitter

Refer to the manual of your bodypack transmitter.

3 Using Your Microphone



The principal benefit of a microphone attached to the user's clothes or integrated in their makeup is that the microphone will maintain a constant working distance independently of the user's movements and thus ensure a constant output level. Also, a clip-on microphone allows the user to move about freely and keeps their hands free.

3.1 Introduction

3.2 Lavalier Miking

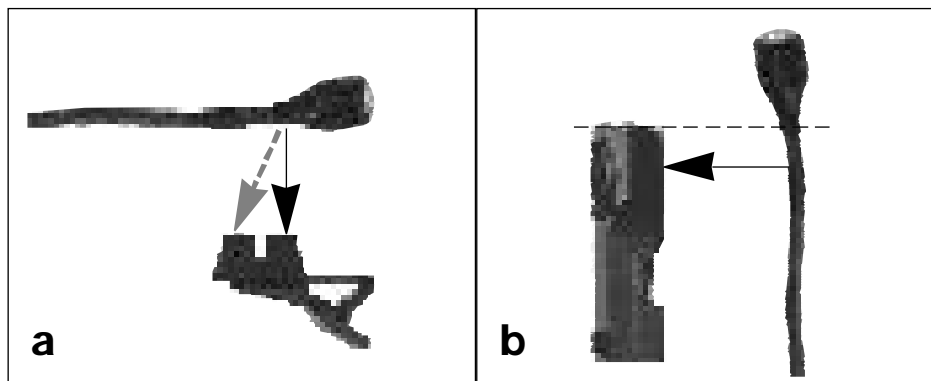


Fig. 5: Fixing the microphone on the clip (a) or tie pin (b).

1. Insert the cable into one of the fixing grooves on the supplied H 40/1 clip (see fig. 5a) or on the supplied H 41 tie pin (see fig. 5b), at a point immediately behind the microphone body.

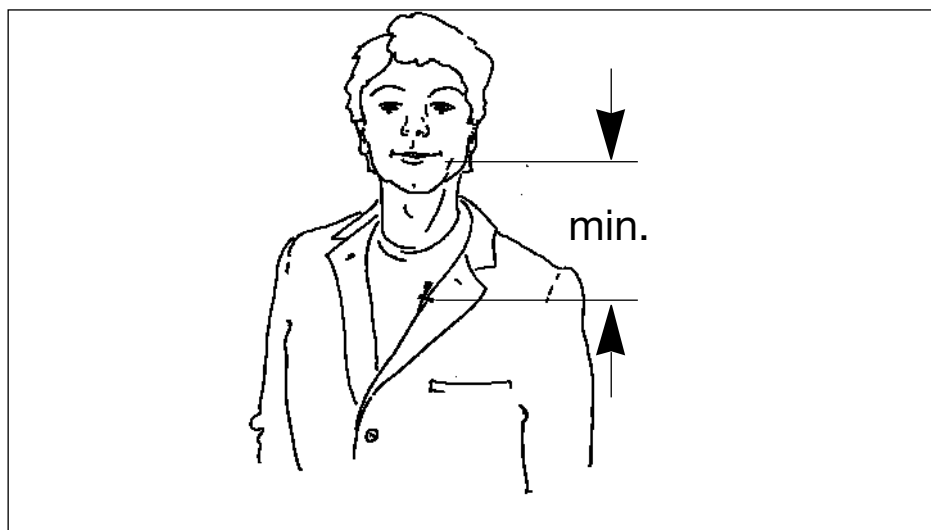


Fig. 6: Attaching the microphone near the user's mouth.

2. Attach the microphone to the talker's clothes, e.g., on the lapel, placing it as close as possible to the talker's mouth.



3 Using Your Microphone

Note:

The smaller the distance between the microphone and the sound source, the higher the usable gain before feedback.

3.3 Live Recording and Spot Miking

1. Insert the cable into one of the fixing grooves on the supplied H 40/1 clip (see fig. 5a) or on the supplied H 41 tie pin (see fig. 5b).
2. Fix the microphone on a suitable part of the stage decoration such as a flat, backdrop, curtain, etc.

3.4 Theater, Musical, Opera



Fig. 7: Microphone integrated in performer's makeup.

Fix the microphone on the user's head, as close as possible to the mouth, and blend it in with the makeup.

Many engineers place the microphone as shown in fig. 7.

Depending on the requirements of the production at hand, you may also attach the microphone in different places, e.g., on the performer's forehead.

3 Using Your Microphone



3.5 Violin

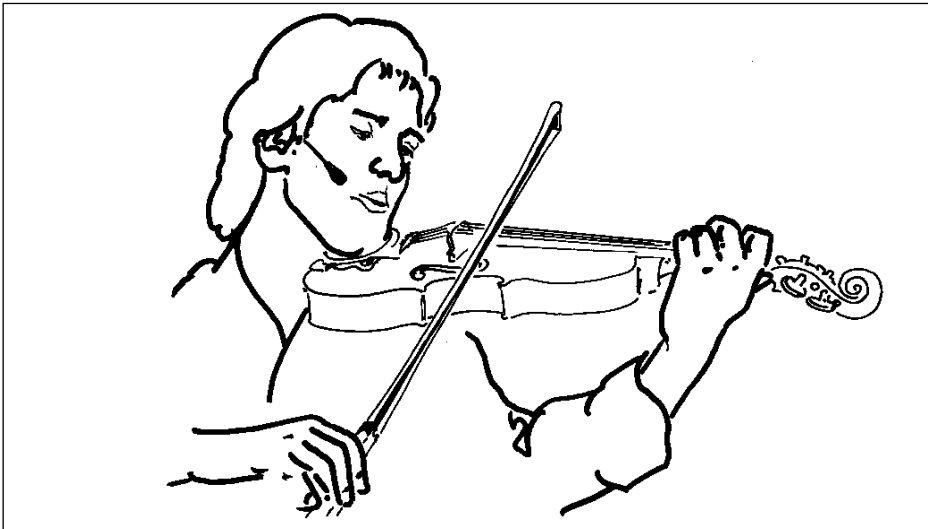


Fig. 8: Miking up a violin.

If the production concept does not allow for microphones mounted on the violin itself, you can attach the microphone with mastic to the violinist's cheek.

Refer to fig. 8.

This method provides the following benefits:

- Since the microphone is not mounted on the violin itself, it will not affect the sound of the instrument.
- There will be no risk of damaging the violin with adhesive tape or similar mounting materials.
- There will be no cable that gets in the way.

4 Cleaning



To clean the microphone case, use a soft cloth moistened with water.



5 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. Gain control on the mixer set too high.2. Mixer input sensitivity too high.	<ol style="list-style-type: none">1. Turn gain control down CCW.2. Connect a 10-dB preattenuation pad between microphone cable and input.

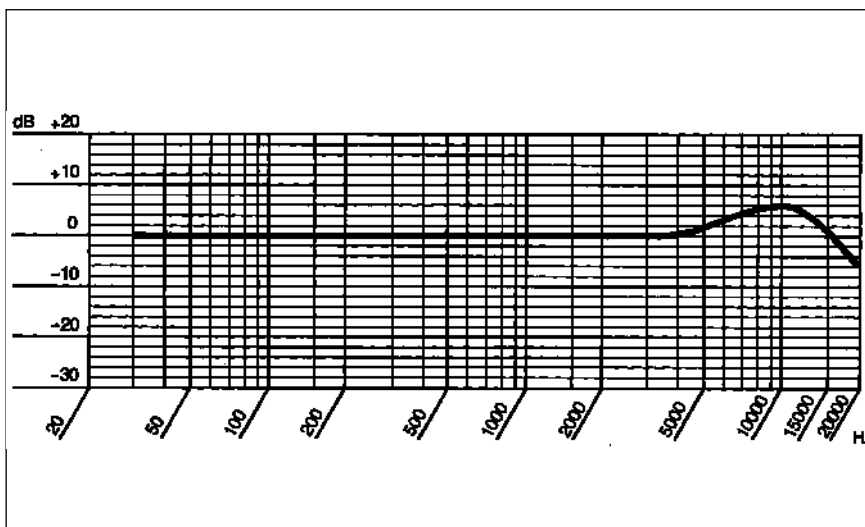
6 Specifications



Type:	pre-polarized condenser microphone
Polar pattern:	omnidirectional
Frequency range:	20 Hz to 20,000 Hz
Sensitivity at 1 kHz:	10 mV/Pa (-40 dBV re 1 V/Pa)
Impedance:	200 Ω
Recommended load impedance:	$\geq 2000 \Omega$
Max. SPL for 1%/3% THD:	118/126 dB SPL
Equivalent noise level:	34 dB (A) (to DIN 45412)
Power requirement:	C 417 ^{III} PP: 9 to 52 V universal phantom power C 417 ^{III} L/PL: B 29 L battery power supply, MPA III L phantom adapter, or AKGWMS bodypack transmitters
Current consumption:	approx. 2.2 mA
Cable length/Connector:	C 417 ^{III} PP: 3 m (10 ft.) / 3-pin male XLR C 417 ^{III} L/PL: 1.5 m (5 ft.) / 3-pin mini XLR
Finish:	matte black (PP, L) or flesh-color (PL)
Size:	7.5 x 15 mm (0.3 x 0.6 in.)
Net/shipping weight:	C 417 ^{III} PP: 8 g (0.3 oz.) / 220 g (7.8 oz.) C 417 ^{III} L/PL: 8 g (0.3 oz.) / 160 g (5.6 oz.)

This product conforms to EN 50 082-1 provided it is connected to equipment with a CE mark.

Frequency Response



Polar Diagram

