AKG CGN 99 C Gooseneck Microphone User Manual

Contents

AKG CGN 99 C Gooseneck Microphone

Product Information

Specifications

- Product Name: CGN 99 C/S, CGN 99 C/L, CGN 99 H/S, CGN 99 H/L, CHM 99
- Mikrofone: See Fig. 9 – 13
- Windschutz (2965Z2001): See Fig. 10 – 13
- Kondensatormikrofon mit Permanentladung
- Mikrofoncharakteristik: Niere, Hyperniere
- Frequency Response: CGN 99 C/S – 70-18,000 Hz, CGN 99 H/S – 50-19,000 Hz, CGN 99 C/L – 70-18,000 Hz
- Sensitivity: CGN 99 C/S – 18 mV/Pa, CGN 99 H/S – 12 mV/Pa, CGN 99 C/L – 18 mV/Pa
- Signal-to-Noise Ratio: 73 dB
- Phantom Power: 9-52V

Product Usage Instructions

Safety and Environment

Ensure proper safety precautions are taken while using the equipment to avoid any accidents or damage. Also, consider the environmental impact of the product.

Description

Introduction

This section provides an overview of the product and its intended use.

Refer to Tabelle 1 for microphone applications based on microphone characteristic, speaker position, and

recommended distance.

Mikrofon charakteristik	Richt-Lautsprecherposition	Beprechungsabstand	Anwendung	
CGN 99 C/S	Niere	nur hinter dem Mikrofon	30 – 60cm	Description
CGN 99 C/L	Niere	nur hinter dem Mikrofon	30 – 90cm	Description
CGN 99 H/S	Niere	nur hinter dem Mikrofon	30 – 60cm	Description
CGN 99 H/L	Niere	nur hinter dem Mikrofon	30 – 90cm	Description
CHM 99	Niere	nur hinter dem Mikrofon	1 – 3m	Description

Assembly and Anschluss

Introduction
This section provides an overview of the installation and connection process.

Schwanenhalsmikrofone
For CGN 99, refer to Fig. 9 and 12 for mounting instructions.

1. Mount the microphone using the optional Montagesockels PS 3 F-Lock on a tabletop or with the optional Stativanschluss SA 60 on a floor or tabletop tripod.
   Note: Refer to Fig. 10 and 11 for additional information.

Stabilized microphones
Refer to Fig. 2 and Fig. 3 for stabilizing the microphone in different applications.

Audio Anschluss
Connect the microphone using the appropriate audio connection method.

Technical Data
Refer to the following table for detailed technical specifications of the microphone.

Mikrofon	Best number	Frequency Response	Sensitivity	Signal-to-Noise Ratio	Phantom Power
CGN 99 C/S	–	70-18,000 Hz	18mV/Pa	73dB	9-52V
CGN 99 H/S	–	50-19,000 Hz	12mV/Pa	73dB	9-52V
CGN 99 C/L	–	70-18,000 Hz	18mV/Pa	73dB	9-52V
CGN 99 H/L	–	–	–	–	–
CHM 99	–	–	–	–	–

FAQs

- **Q: How should I connect the microphone to an audio system?**
  A: Refer to section 4.3.3 for detailed information on audio connection methods.
- **Q: What is the recommended distance for microphone applications?**

A: Refer to Tabelle 1 for recommended distances based on the microphone characteristic and speaker position.

Safety and Environment

1. Do not spill any liquids on the equipment and do not drop any objects through the ventilation slots in the equipment.
2. Do not place the equipment near heat sources such as radiators, heating ducts, amplifiers, etc., and do not expose it to direct sunlight, excessive dust, moisture, rain, mechanical vibrations, or shock.
3. The packaging of the equipment is recyclable. To dispose of the packaging, make sure to use a collection/recycling system provided for that purpose and observe local legislation relating to waste disposal and recycling.

Description

Introduction

Thank you for purchasing a Discreet Acoustics module. The Discreet Acoustics Compact Series comprises four gooseneck microphones, one flown micro-phone, and dedicated accessories for every application and every type of venue.

Microphones Refer to figs. 9 to 14.

- **CGN 99 C/S (order no. 2965H00110):** 380-mm (15-in.) cardioid gooseneck microphone with integrated DPA XLR phantom power adapter and external foam windscreen. CGN 99 H/S (order no. 2965H00120): 380-mm (15-in.) hypercardioid gooseneck microphone with integrated DPA XLR phantom power adapter and external foam windscreen.
- **CGN 99 C/L (order no. 2965H00130):** 576-mm (23-in.) cardioid gooseneck microphone with integrated DPA XLR phantom power adapter and external foam windscreen. CGN 99 H/L (order no. 2965H00140): 576-mm (23-in.) hyper cardioid gooseneck microphone with integrated DPA XLR phantom power adapter and external foam windscreen.
- **CHM 99 (order no. 2965H00150):** cardioid flown microphone with spring clamp and 10-m (33-ft.) special cable with DPA XLR phantom power adapter.

Windscreen (2965Z2001)

- Always use the supplied windscreen (unless it would be too visually obtrusive). It protects the microphone from dust and moisture and reduces pop and wind noise to a minimum.

Optional Accessories

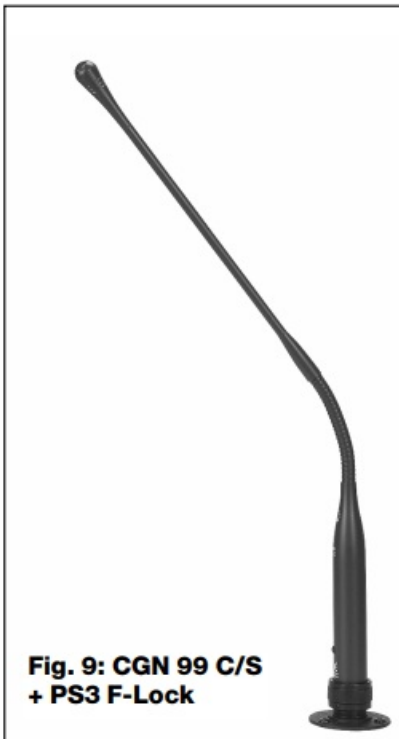


Fig. 9: CGN 99 C/S
+ PS3 F-Lock

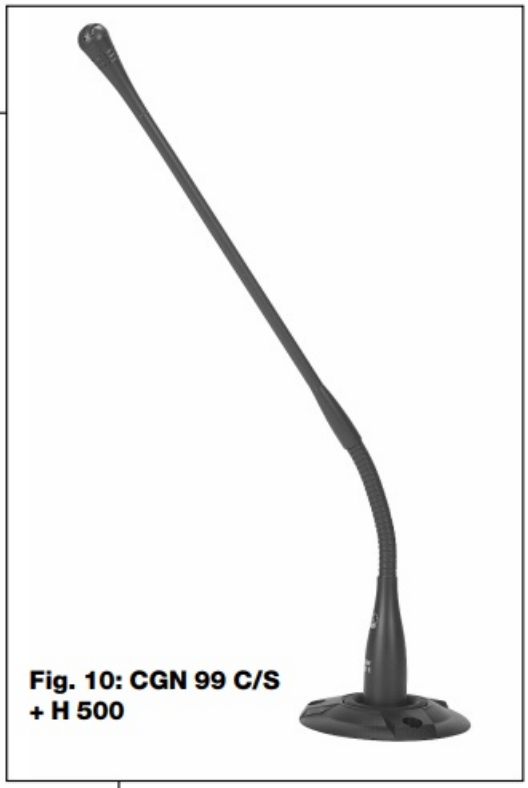


Fig. 10: CGN 99 C/S
+ H 500

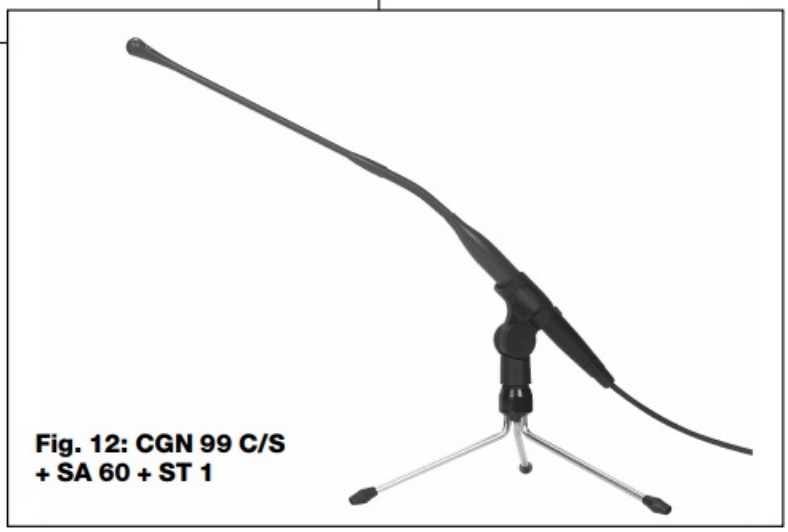


Fig. 12: CGN 99 C/S
+ SA 60 + ST 1

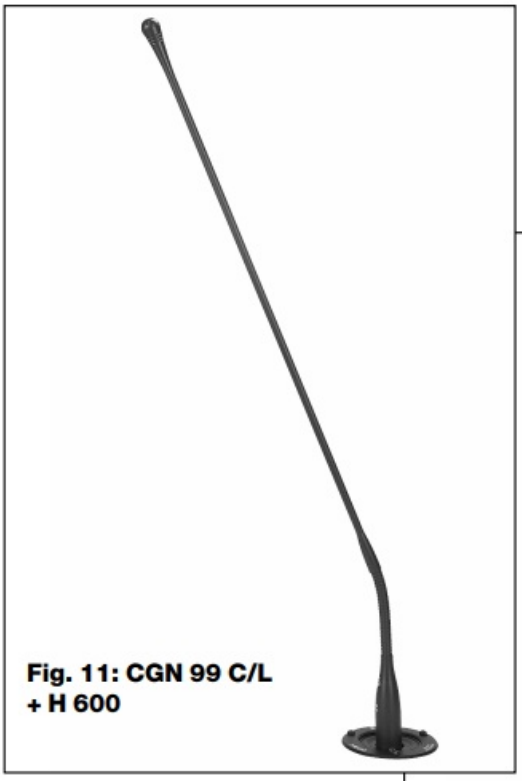


Fig. 11: CGN 99 C/L
+ H 600

Fig. 14: CHM 99

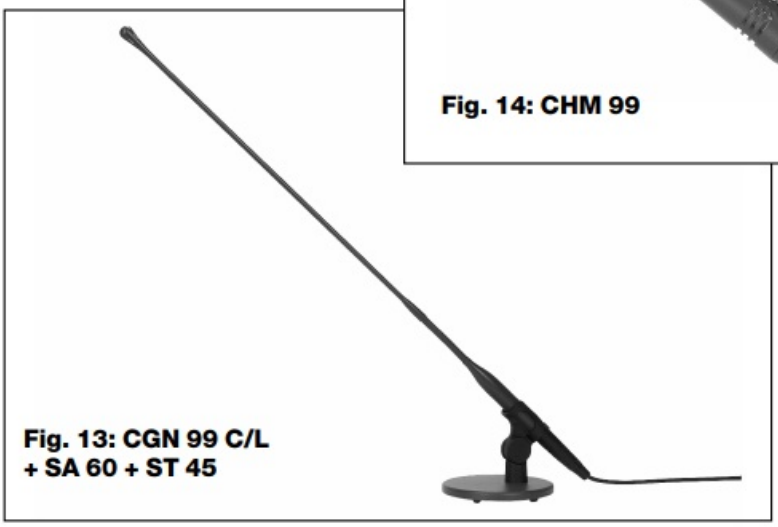


Fig. 13: CGN 99 C/L
+ SA 60 + ST 45

- B 18 battery power supply for all Discreet Acoustics Compact microphones.
- PS3 F-Lock panel mount socket for all Discreet Acoustics Compact gooseneck microphones (not for CHM 99).
- H 500 shock mount for all Discreet Acoustics Compact gooseneck microphones (not for CHM 99).
- H 600 shock mount for all Discreet Acoustics Compact gooseneck microphones (not for CHM 99).
- SA 60 stand adapter for all Discreet Acoustics Compact gooseneck microphones (not for CHM 99).
- ST 1, ST 45 table stands for all Discreet Acoustics Compact gooseneck microphones (not for CHM 99).

Microphone Applications

Note that both the maximum working distance and the area covered by the microphone depend on the pickup angle. The smaller the pickup angle (hypercardioid), the longer the maximum distance between the talker and the microphone and the smaller the area covered by the microphone. Whether a cardioid or hypercardioid capsule will give the best results therefore depends on the specific application situation).

Microphone	Polar Pattern	Speaker position	Working distance	Application
CGN 99 C/S	Cardioid	Beinde the micro-phone only	30 to 60 cm* (1 to 2 fe et)	Sound system
CGN 99 H/S	Hypercardioid	90° to 135° off microphon e axis	30 to 90 cm* (1 to 3 fe et)	Sound system
CGN 99 C/L	Cardioid	Behind the micro- phone only	30 to 60 cm* (1 to 2 fe et)	Sound system
CGN 99 H/L	Hypercardioid	90° to 135° off microphon e axis	30 to 90 cm* (1 to 3 fe et)	Sound system
CHM 99	Cardioid	Behind the micro- phone only	1 to 3 m* (3.5 to 10 fee t)	Sound system

Table 1: Microphone applications.
* Depending upon the Acoustic environment

Installation and Connection

Introduction
All Discreet Acoustics Compact microphones are condenser microphones and therefore require a power supply (phantom power). The microphones have been designed for connection to microphone inputs with 9 to 52 V phantom power. To connect Discreet Acoustics Compact microphones to inputs without phantom power, refer to Section 4.4.

4.2 CGN 99 …Gooseneck Microphones Refer to figs. 9 and 12.

1. Use the optional PS 3 F-Lock panel mount socket to install the microphone in a tabletop or an optional SA 60 stand adapter to mount the microphone on a floor or table stand.
   Note For even better vibrational noise rejection, you can fix the microphone to the tabletop with an optional H 500 or H 600 shock mount.
2. Use a shielded cable to connect the microphone to a microphone input with phantom power.
3. If the phantom power on your mixing console is switchable, switch the phantom power on. (Refer to the instruction manual for your mixing console.)
   The microphone is powered directly from the phantom power source on the console.

CHM 99 Flown Microphone

1. Before installing the microphone, straighten the cable by carefully pulling it through your fingers. Make sure not to buckle or twist the cable. Let’s hang for 1 day to untwist.
2. Fasten a hook to the ceiling, use an existing hook, or stretch a fishing line across the hall.
3. Pass the cable through the hook or over the line so that it will hang at the desired height.
   Important! Do not tie a knot into the cable to hang it on the hook. This may cause the cable to twist and misalign the microphone after a while.

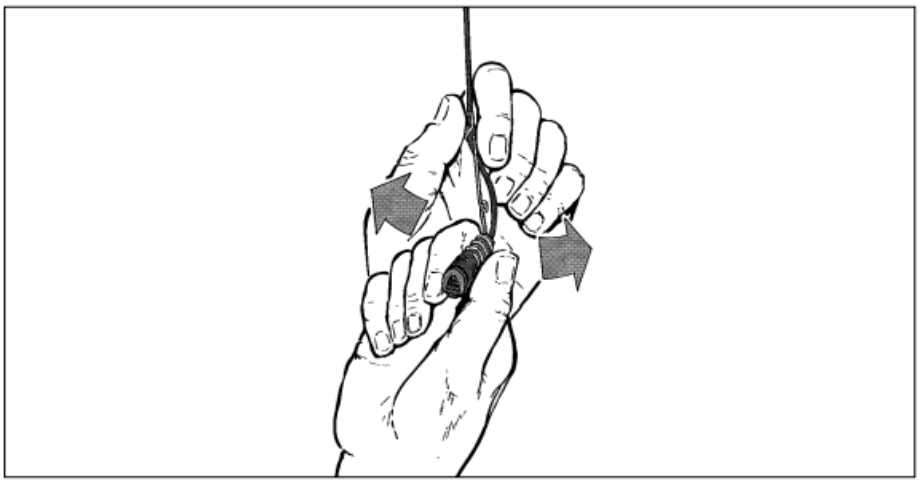


Fig. 1: Aligning the microphone.

4. Hold the cable with one hand and turn the microphone carefully into the desired position.

Note:

- The cable on the CHM 99 will twist as the ambient temperature changes, e.g., in the heat generated by spotlights.
- The angle of twist depends both on the ambient temperature and the cable length. The shorter the cable, the smaller the amount of twist.
- If you use spotlights, be sure to turn them on before aligning the microphone.
- When you turn the spotlights off, the microphone will rotate out of alignment. Upon turning the spotlights back on, the microphone should rotate back into its original position.

To stabilize the microphone,

1. Leave an appropriate length of fishing line through the eyelet on the spring clamp of the CHM 99.
2. Fix the fishing line to two opposite walls so as to create just enough downward pull to steady the micro-phone laterally.

Applications

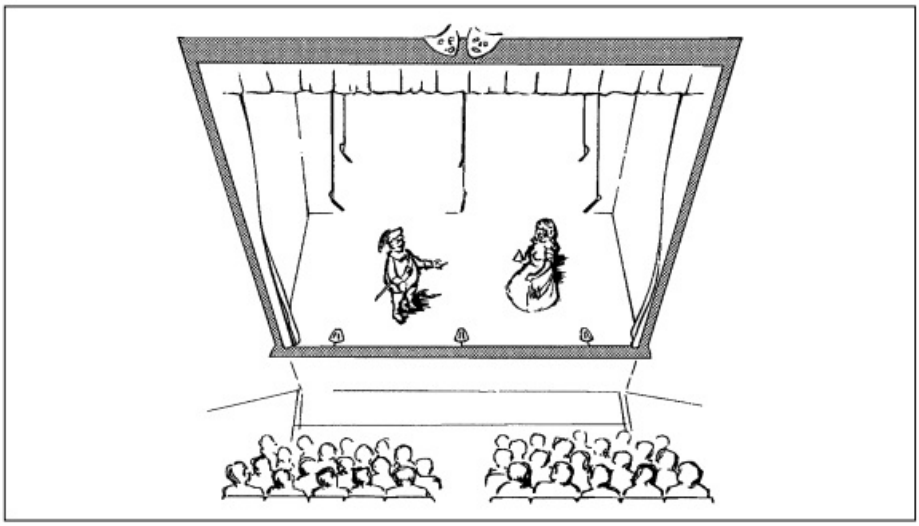


Fig. 2: Theater stage miking

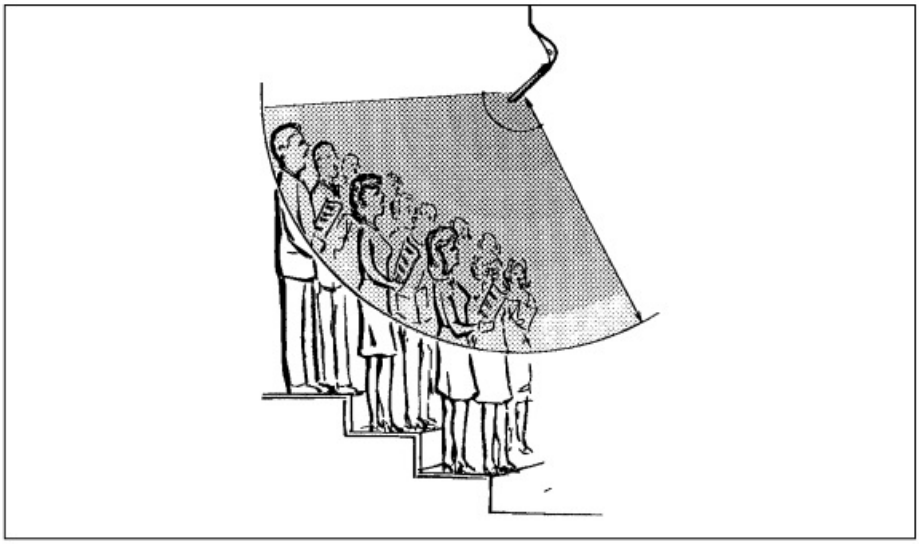


Fig. 3: Miking up a choir

Audio Connection

1. Use a shielded balanced cable to connect the microphone to a microphone input with phantom power.
2. If the phantom power on your mixing console is switchable, switch the phantom power on. (Refer to the instruction manual for your mixing console.)
   The microphone is powered directly from the phantom power source.

Connecting to Inputs without Phantom Power

- If your mixer has no phantom power, insert an external phantom power supply between the DPA phantom power adapter and mixer input. We recommend the optional B 18 power supplies from AKG. Using any power supplies not recommended by AKG may damage your microphone and void the warranty.
- You may also consider having a qualified technician retrofit a phantom power supply as per IEC 61938 to balanced or unbalanced mixer inputs. The IEC 61938 standard specifies a positive voltage of 12, 24, or 48 V on the audio lines versus the cable shield.

Balanced Inputs

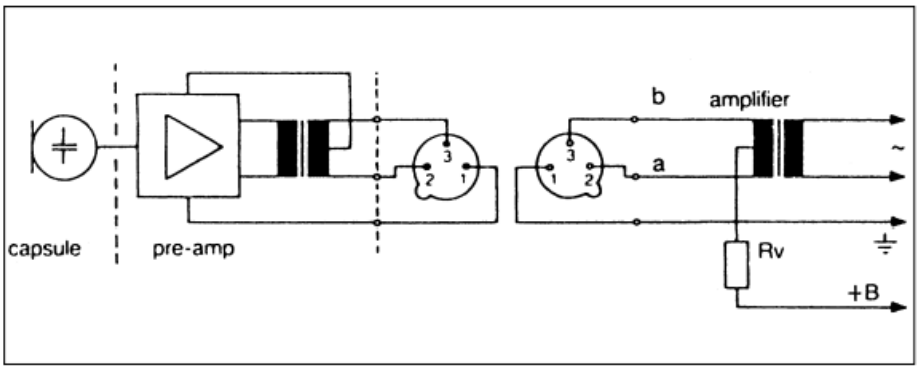


Fig. 4: Input transformer **with center tap** (ungrounded)

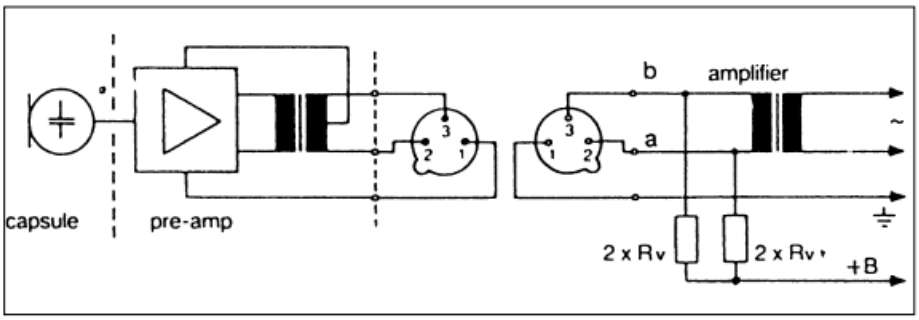


Fig. 5: Input transformer with **no center tap** (ungrounded)

If your equipment inputs are grounded or transformer-less, wire either capacitors or extra transformers into the audio lines as shown in fig. 9 above to prevent any current leakage into the input stage.

Unbalanced Inputs

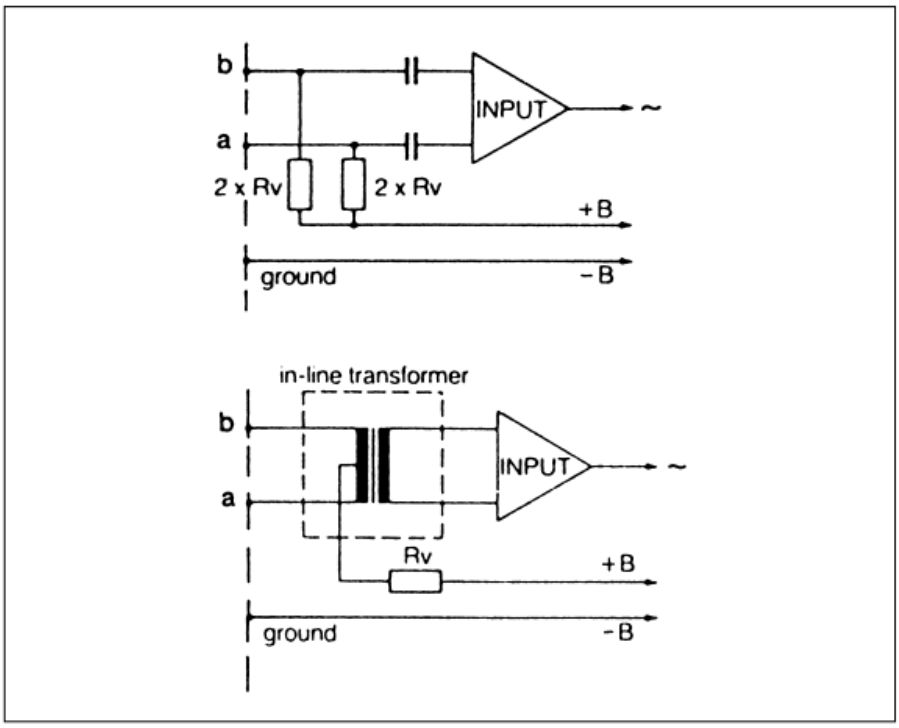


Fig. 6: Unbalanced input stage

Table 2: Standard values for Rv and 2 x Rv

VDC	Rv	2 x Rv*
12 V ±2 V	330 Ω	680 Ω
24 V ±4 V	680 Ω	1,200 Ω
48 V ±4 V	3,300 Ω	6,800 Ω

Table 2: Standard values for Rv and 2 x Rv

* To satisfy the IEC 61938 symmetry requirement, make sure the actual values of the two resistors 2 x Rv do not

differ by more than 0.5%!

Bass Cut
The DPA phantom power adapter is equipped with a bass-cut filter to minimize low-frequency noise.

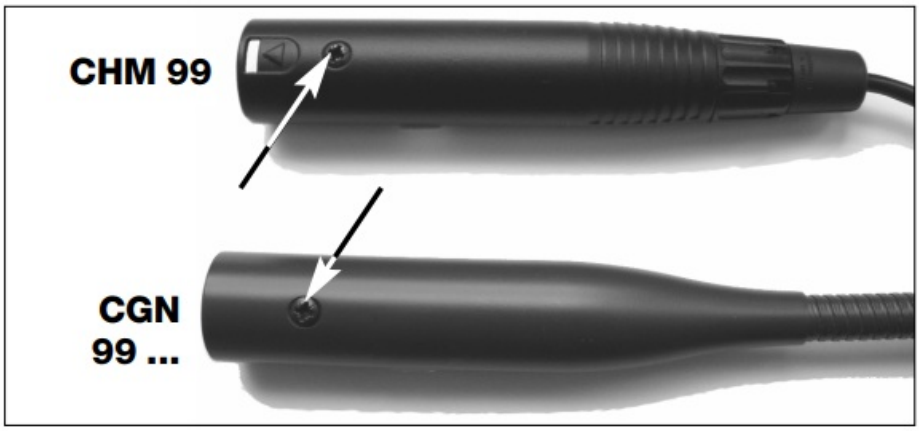


Fig. 7: Fixing screw.

1. Unscrew the fixing screw on the microphone or DPA phantom power adapter.
2. Pull the circuit board out of the case WITH CAUTION – so as not to break the internal leads.

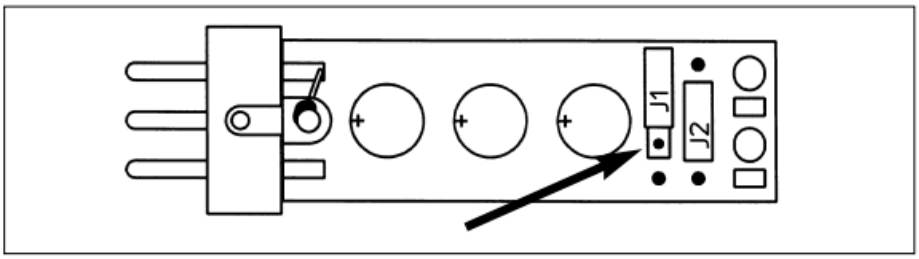
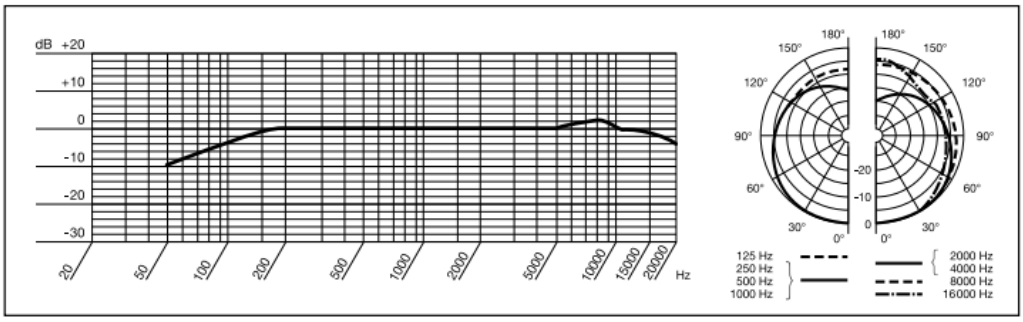


Fig. 8: DPA circuit board.

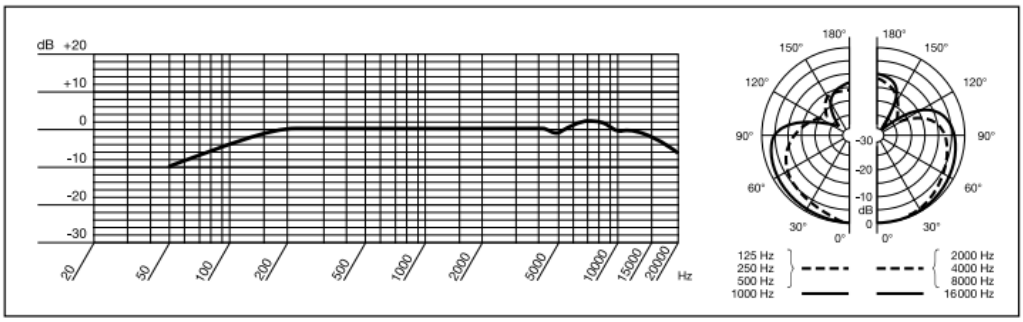
3. To activate the bass cut filter, plug the jumper J1 into the central contact pair on the circuit board.

Specifications

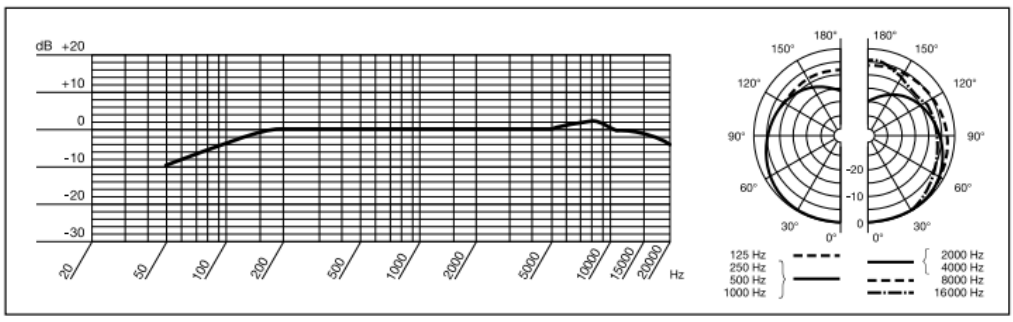
Microphone	**CGN 99 C/S** **CGN 99 C/L**	**CGN 99 H/S** **CGN 99 H/L**	**CHM 99**
Type	Pre-polarized condenser microphone		
Polar pattern	Cardioid	Hypercardioid	Cardioid
Frequency range	70 to 18,000 Hz	50 to 19,000 Hz	70 to 18,000 Hz
Sensitivity	18 mV/Pa -35 dBV*	12 mV/Pa -38 dBV*	18 mV/Pa -35 dBV*
Max. SPL for 1% THD	125 dB	125 dB	125 dB
Equivalent noise level	<21 dB-A	<21 dB-A	<21 dB-A
Signal/noise ratio (A-weighted.)	>73 dB	>73 dB	>73 dB
Electrical impedance	<600 W	<600 W	<600 W
Recommended load impedance	>2000 W	>2000 W	>2000 W
Power requirement	9 to 52 V phantom power to IEC 61938 (DPA adapter integrated)		
Current consumption	<3 mA	<3 mA	<3 mA
Connector	XLR-3	XLR-3	XLR-3
Finish	matte black	matte black	matte black
Size (capsule dia. x length)	13.5 x 380 mm (0.5 x 15 in.) 13.5 x 580 mm (0.5 x 23 in.)	13.5 x 380 mm (0.5 x 15 in.) 13.5 x 580 mm (0.5 x 23 in.)	13.5 x 55 mm (0.5 x 2.1 in.)
Net/shipping weight	160/480 g (5.7/17 oz.) 170/500 g (6/17.7 oz.)	160/480 g (5.7/17 oz.) 170/500 g (6/17.7 oz.)	20/480 g (0.7 x 17 oz.)
Order no.	2965H00110 2965H00130	2965H00120 2965H00140	2965H00150



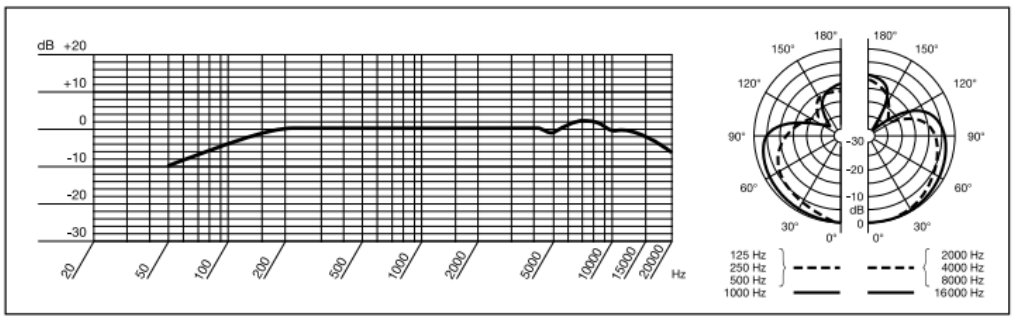
CGN 99 C/S Frequency Response & Polar Diagram



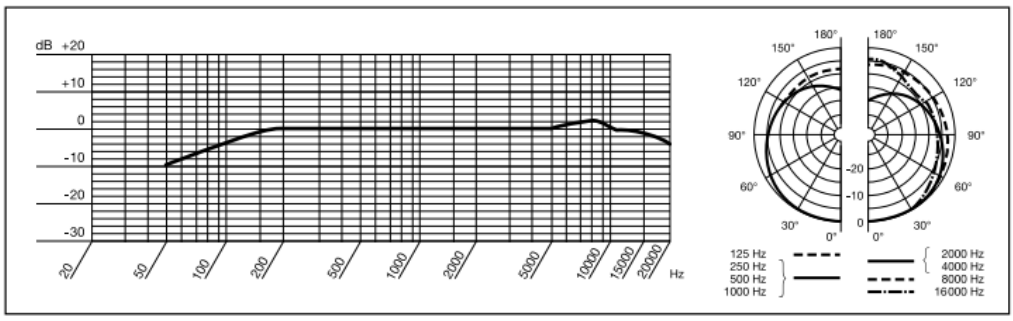
CGN 99 H/S Frequency Response & Polar Diagram



CGN 99 C/L Frequency Response & Polar Diagram



CGN 99 H/L Frequency Response & Polar Diagram



CHM 99 Frequency Response & Polar Diagram

* re 1 V/Pa

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**.

Documents / Resources

	AKG CGN 99 C Gooseneck Microphone [pdf] User Manual CGN 99 C Gooseneck Microphone, CGN 99 C, Gooseneck Microphone, Microphone

References

- Official AKG Store â€“ Microphones, Headphones, and More!
- Manual-Hub.com - Free PDF manuals!
- User Manual