

C 451 B

BEDIENUNGSANLEITUNG S. 2

Bitte vor Inbetriebnahme des Gerätes lesen!

USER INSTRUCTIONS p. 12

Please read the manual before using the equipment!

MODE D'EMPLOI p. 22

Veuillez lire cette notice avant d'utiliser le système!

ISTRUZIONI PER L'USO p. 32

Prima di utilizzare l'apparecchio, leggere il manuale!

MODO DE EMPLEO p. 42

¡Sirvase leer el manual antes de utilizar el equipo!

INSTRUÇÕES DE USO p. 52

Favor leia este manual antes de usar o equipamento!

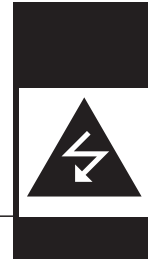




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1 Safety and Environment



- 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 Safety



1.2 Environment

1. When scrapping the equipment, separate the case, circuit boards, and cables, and dispose of all components in accordance with local waste disposal rules.
 2. 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.
-



2 Description

2.1 Introduction

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

2.2 Packing List



- **1 Soundtool Case** (small)
- **1 C 451 B** with individual response curve
- **1 SA 60**
- **1 W 90**

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

2.3 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.
-

2.4 Selected Features

- Same transducer as in the legendary CK 1.
 - Rugged construction.
 - Low self-noise.
 - Low current consumption.
 - High reliability.
 - Transformerless output stage.
 - Operates on phantom power to IEC 61938.
 - Built-in, switchable 10-dB or 20-dB preattenuation pad.
 - Built-in, switchable 12 dB/octave highpass filter at 75 Hz or 150 Hz.
-

2 Description



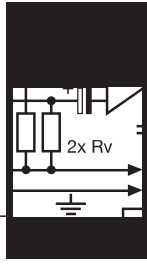
2.5 Summary

The C 451B is an updated rerun of a classic AKG condenser microphone, the C 451 EB + CK 1. The new C 451B, however, uses a fixed capsule to eliminate the mechanical problems of the original modular design. The microphone is the perfect choice for any application where sounds, particularly their transient content, need to be captured with maximum accuracy.

Owing to its extremely light diaphragm, the microphone is highly insensitive to handling noise. An all-metal body provides efficient protection from RF interference and the microphone is rugged enough to give excellent results even under very harsh conditions.

A switchable 10-dB/20-dB preattenuation pad increases the microphone's SPL capability when close-miking high-energy sound sources or driving preamps or mixers with limited headroom.

A switchable highpass filter at 75 Hz or 150 Hz helps minimize low-end distortion that may be caused, e.g., by rumble or wind noise. The slope of the filter is approx. 12 dB/octave and its corner frequency (3 dB down point) is selectable at 75 Hz or 150 Hz.



3 Interfacing

3.1 General

The C 451B is a condenser microphone and therefore needs a power supply.

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

Pin 1: ground

Pin 2: hot

Pin 3: return

Refer to sections 3.2 and 3.3.

- You can connect the microphone to balanced microphone inputs with or without phantom power. AKG phantom power supplies allow you to connect the microphone to unbalanced inputs as well.

3.2 Balanced Input with Phantom Power

Refer to fig. 1 below.

- Use an XLR cable to connect the microphone to a balanced XLR input with phantom power.
- Switch the phantom power on. (Refer to the instruction manual of the unit to which you connected your C 451B.)

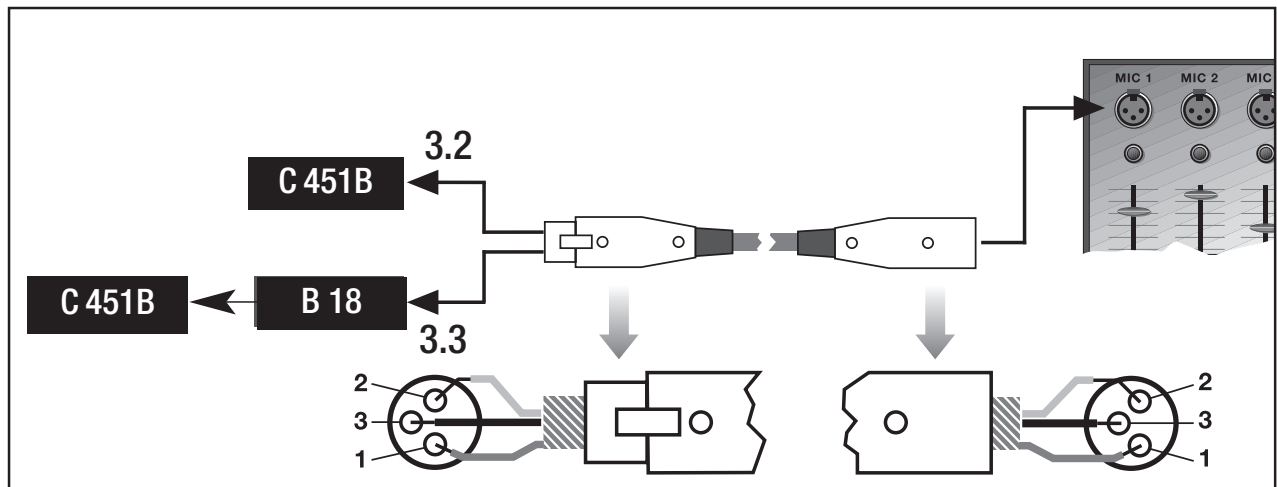
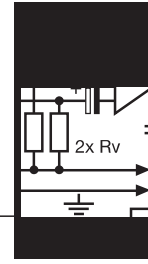


Fig. 1: Connecting to a balanced input.

3 Interfacing



1. If your mixer provides no phantom power, connect an optional AKG B 18 phantom power supply between the microphone and the mixer.

3.3 Balanced Input with No Phantom Power

Refer to fig. 1 (p. 16).

You may connect the AKG B 18 phantom power supply to unbalanced inputs as well.

3.4 Unbalanced Input

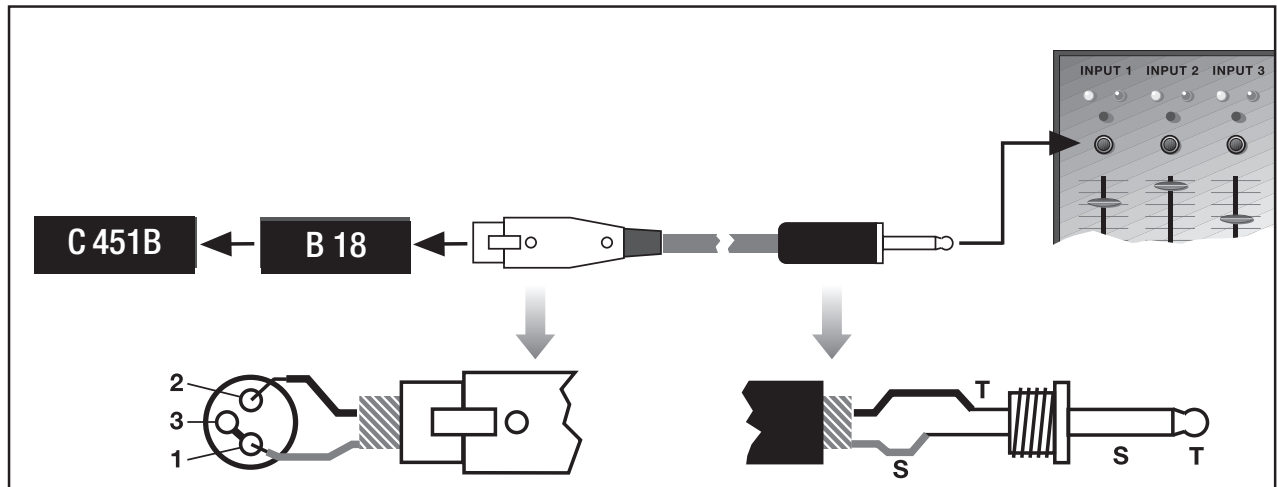


Fig. 2: Connecting to an unbalanced input.

- 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.

Refer to fig. 2 above.

- 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).

Note:



4 Using Your Microphone

4.1 Introduction

The rod-shaped body, accurate response, and many matching accessories from AKG make it easy to use the microphone to pick up a wide range of different instruments.

- Read the hints below to get the best possible results.

4.2 Proximity Effect

Owing to their acoustic principle, unidirectional microphones exhibit what is called "proximity effect". This means that the low-frequency content of a sound signal will be progressively boosted as you move the microphone closer to the sound source. Proximity effect begins to become audible at a working distance of about 2 feet (60 cm). Depending on the nature of the sound source, proximity effect may be desirable or a nuisance. Place the microphone closer to the sound source to accentuate, or further away to reduce proximity effect.

4.3 Feedback in Live Sound Situations

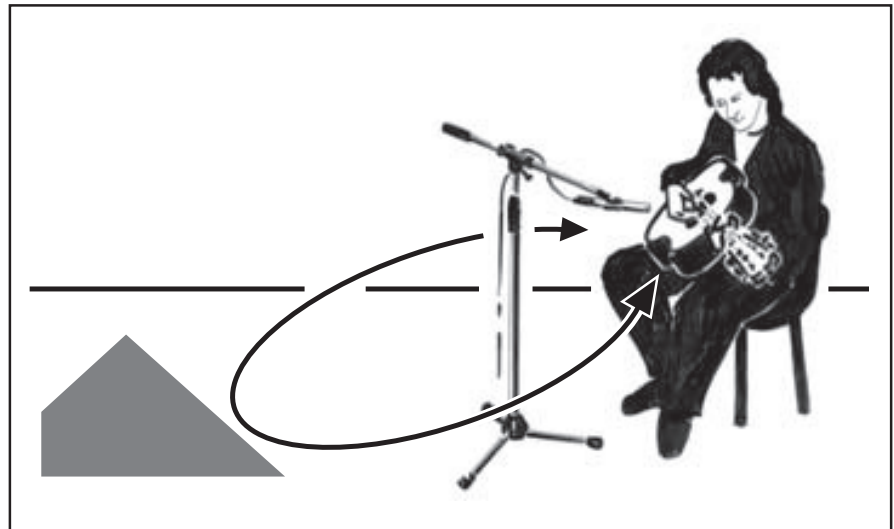


Fig. 3: Microphone placement for maximum gain before feedback.

Feedback results from part of the sound projected by a speaker being picked up by a microphone, fed to the amplifier, and projected again by the speaker. Above a specific volume or "system gain" setting called the feedback threshold, the signal starts being regenerated indefinitely, making the sound system howl and the sound engineer desperately dive for the master fader to reduce the volume and stop the howling.

4 Using Your Microphone



To increase usable gain before feedback, the microphone has a cardioid polar pattern. This means that the microphone is most sensitive to sounds arriving from in front of it (from the sound source) while picking up much less of sounds arriving from the sides or rear (from monitor speakers for instance).

To obtain maximum 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 the monitors, or at the FOH speakers.

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.

Refer to fig. 3 on page 18.

If you are miking up an extremely loud sound source or have placed the microphone extremely close to an instrument, the diaphragm may be exposed to extremely high sound pressure levels. As a result, the electrical output signal of the transducer may become high enough to overload the subsequent impedance converter/preamplifier and introduce audible distortion. To minimize the risk of getting audible distortion, use the preattenuation switch on the microphone shaft to switch in 10 dB (1:3) or 20 dB (1:10) of preattenuation.



4.4 Preattenuation Pad

Fig. 4: Preattenuation switch.



4 Using Your Microphone

4.5 Highpass Filter

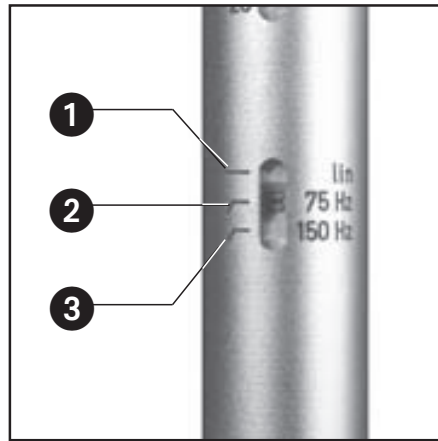


Fig. 5: Highpass filter switch.

Refer to fig. 5 above.

Low-frequency rumble or wind noise such as air conditioning rumble, traffic noise, structure-borne noise, etc. that usually pass unnoticed may become a clearly audible nuisance on a recording.

To minimize low-frequency noise, you can switch in the highpass filter. Depending on the spectra of the wanted and unwanted signals, set the highpass filter switch on the microphone shaft from flat (1) to a corner frequency of 75 Hz (2) or 150 Hz (3). In either position, the slope of the filter is 12 dB/octave (1:4) downward.



5 Cleaning

5.1 Microphone Body

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

5.2 Windscreen

- Wash the foam windscreen in soap suds. Do not use the windscreen before it has dried completely.
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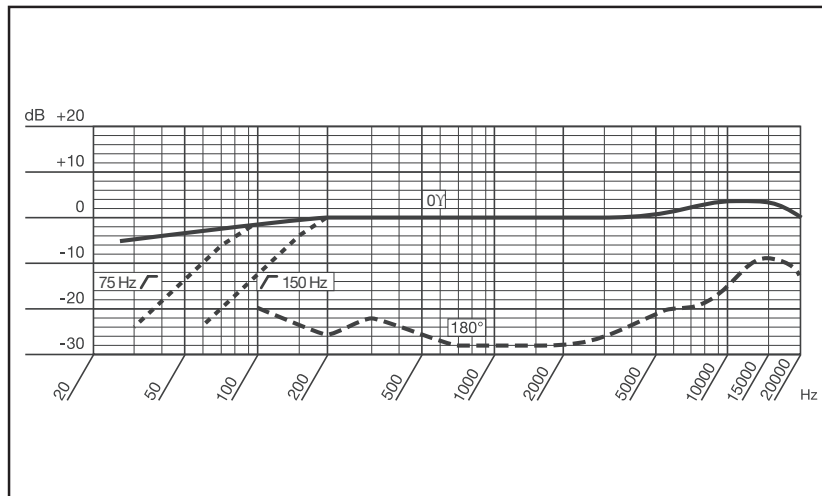


Polar pattern:	cardioid
Frequency range:	20 to 20,000 Hz \pm 1.5 dB from published curve
Sensitivity:	9 mV/Pa / -41 dBV re 1 V/Pa
Electrical impedance:	< 200 ohms
Recommended load impedance:	> 1000 ohms
Max. SPL for 0.5% THD:	112 Pa / 135 dB SPL with 0 dB preattenuation*) 355 Pa / 145 dB SPL with 10 dB preattenuation*) 1120 Pa / 155 dB SPL with 20 dB preattenuation*)
Equivalent noise level to IEC 60268-4 (A-weighted):	18 dB-A
Dynamic range:	117 dB max. (A-weighted)*
Preattenuation pad:	switchable to 0 dB, -10 dB, -20 dB
Highpass filter:	switchable to flat or 12 dB/octave at 75 Hz or 150 Hz
Powering:	9 to 52 V phantom power to IEC 61938
Operating temperature:	-20°C to +60°C
Connector:	3-pin male XLR
Finish:	satin nickel plated
Size:	dia.: 19 mm (0.7 in.); length: 160 mm (6.3 in.)
Net/shipping weight:	125 g (4.4 oz.) / 760 g (1.7 lbs.)

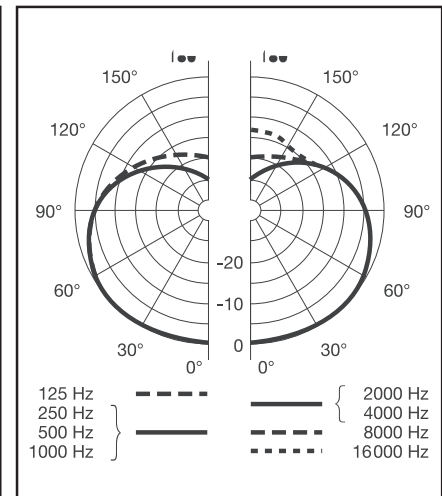
*) Values measured with 48-V phantom power. Reduce by 2 dB for 24-V or 8 dB for 12-V phantom power.

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.ake.com> or contact sales@ake.com.

Frequency Response



Polar Diagram



Mikrofone · Kopfhörer · Drahtlosmikrofone · Drahtloskopfhörer · Kopfsprechgarnituren · Akustische Komponenten
Microphones · Headphones · Wireless Microphones · Wireless Headphones · Headsets · Electroacoustical Components
Microphones · Casques HiFi · Microphones sans fil · Casques sans fil · Micros-casques · Composants acoustiques
Microfoni · Cuffie HiFi · Microfoni senza filo · Cuffie senza filo · Cuffie-microfono · Componenti acustici
Micrófonos · Auriculares · Micrófonos inalámbricos · Auriculares inalámbricos · Auriculares con micrófono · Componentes acústicos
Microfones · Fones de ouvido · Microfones s/fios · Fones de ouvido s/fios · Microfones de cabeça · Componentes acústicos

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H A Harman International Company

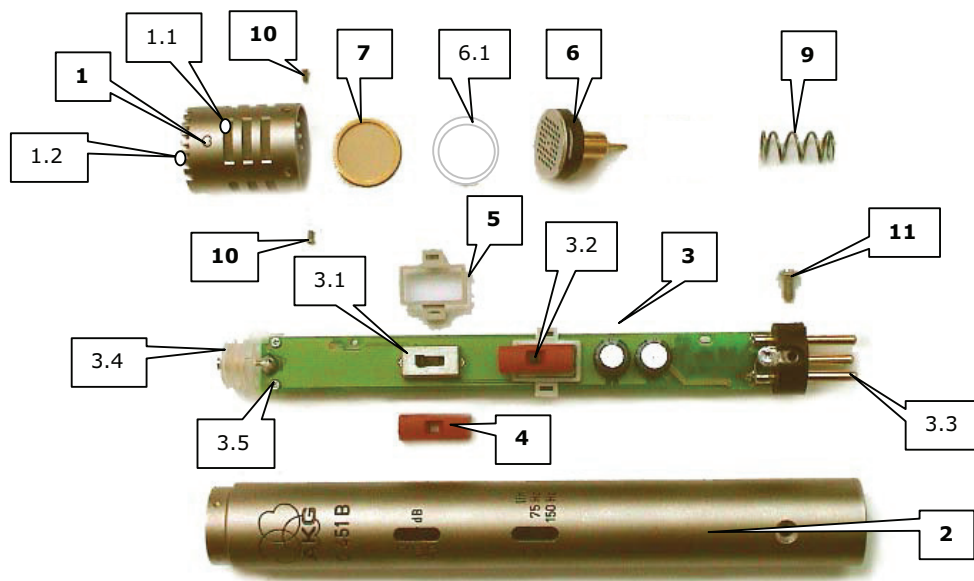
Technische Änderungen vorbehalten. Specifications subject to change without notice. Ces caractéristiques sont susceptibles de modifications.
Ci riserviamo il diritto di effettuare modifiche tecniche. Nos reservamos el derecho de introducir modificaciones técnicas. Especificações sujeitas a mudanças sem aviso prévio.

Printed in Austria

11/08/9100 U 10410



C451B: 2895Z0001 C451B/ST: 2895Z0021 C451B: 2895Z00060 65th Anniversary Edition



Description	Pos.	Part Nbr. Best.-Nr.	Quant Stück	Bezeichnung
Cap	1	2895Z1401	1	Kappe
Cap (Anniversary Edition)	1	5022468	1	Kappe (Anniversary Edition)
Grid sleeve	1.1	2895Z0801	1	Gitterhülse
Top grid	1.2	2895Z0701	1	Gitter oben
Housing, new version	2	2895Z0502	1	Gehäuse, neue Ausführung
Housing (Anniversary Edition)	2	5022469	1	Gehäuse (Anniversary Edition)
Housing, old version	2	2895Z2501	(1)	Gehäuse, alte Ausführung
Printed circuit board, complete	3	2895M0101	1	Print, komplett
Pad switch	3.1	0040E0186	1	Dämpfungsschalter
Bass switch	3.2	0040E0132	1	Bass - Schalter
Connector	3.3	0016E0346	1	Steckereinsatz
Contact carrier ***	3.4	2895M0201	1	Kontaktträger ***
Screw for contact carrier	3.5	0099N1402	2	Schraube für Kontaktträger
Switch cover	4	2439Z2103	2	Schalterblende
Switch cover (Anniversary Edition)	4	5022496	2	Schalterblende (Anniversary Edition)
Holder	5	2439Z2903	2	Stütze
Electrode, complete	6	2895M0601	1	Elektrode, komplett
Insulation sleeve	6.1	2230Z2801	1	Distanzhütchen
Membrane, complete	7	2230M0901	1	Membrane, komplett
Insulation strip *	8	2895Z1502	1	Isolationsstreifen *
Spring	9	2895Z1202	1	Feder
Screw M1,4x4	10	0070N1403	4	Schraube M1,4x4
Screw M2,5x6	11	0966D2507	1	Schraube M2,5x6
Screw M2,5x6 (Anniversary Edition)	11	5023328	1	Schraube M2,5x6 (Anniversary Edition)
Stand adapter SA40	--	6001H0311	1	Stativanschluß SA40
Windshield W90	--	2496Z0001	1	Windschutz W90
Stereo bar H50 **	--	6000H0571	1	Stereoschiene H50 **
Carrying case	--	1605P0003	1	Zippetui
Upper insert for case	--	8998P0025	1	Einlage oben für Etui
Lower insert for case	--	8998P0021	1	Einlage unten für Etui
Case for stereo version	--	3828P0504	1	Koffer für Stereoersion

*) See picture on page 2./ Siehe Abbildung auf Seite 2.

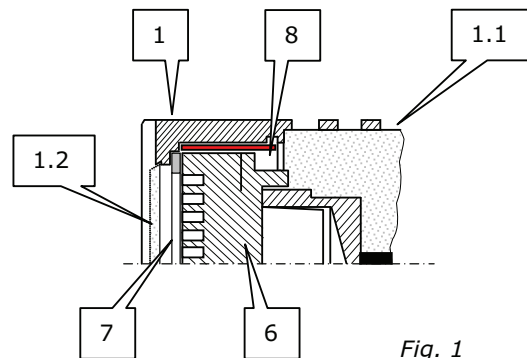
***) Used for the stereo version C451B/ST only. / Nur für Stereoersion C451B/ST.

****)Please see page 4 / Bitte Seite 4 beachten.

How to dismantle the capsule side:

For access to the capsule elements or for replacing the cap hold microphone in one hand with the thumb pressing **firmly** against the top end of the capsule. The cap is spring loaded and needs quite some force to be held in place. Now undo the four screws 10. **Attention, danger:** During this job, never release the cap 1. Otherwise the spring 9 will cause the cap to suddenly come off when loosing the fourth screw causing damage or injuries. Once the screws 10 are removed, slowly and gently release the cap 1 from the housing 2 and take off cap with capsule assembly. The electrode 6 can be pulled out from the housing by spring 9. Please never touch the surface of the electrode with bare fingers and prevent any direct mechanical contact. The membrane 7 lies loosely in the cap 1 and it's surface must never be touched. Take the part only with utmost care on the circumference of the gold plated holder ring using a fine sized pair of tweezers. Take care that the ring is not bent.

Inside the front portion of the cap 1 a plastic insulation strip 8 is inserted at the area where the high impedance elements of the capsule are close to the cap's inner wall (Fig. 1). When replacing the cap this insulation strip either has to be renewed or taken out from the former cap and used again if not mechanically damaged. The strip 8 is not contained in spare part 1.



Mounting the insulation strip 8 has to be done very carefully. If fitted correctly the strip shall perfectly cling to the inner wall of the cap. Otherwise proper insertion of membrane and electrode will not be possible. It may be easier to put the membrane 7 in place first and than wrap the strip over the membrane ring. If not carefully done the danger of accidental damage to the membrane foil however is high.

The cap 1 already contains top grid 1.2 and grid sleeve 1.1. The latter is secured to the cap housing with a two component conductive adhesive. If ever possible this procedure should be carried out when fixing new grid sleeves.

How to remove the amplifier board

If only the printed circuit board or parts of it need replacement, it is not necessary to remove the cap. Press the microphone with it's connector end firmly to a plain surface against the force of the spring. Then remove screw and pull out the board 3. When reassembling the capsule contact sleeve will find it's way to the capsule's contact pin simply by pushing the board home. Now press board into housing and fasten screw 11. For replacing the contact carrier 3.4 remove all solder from the joint between capsule connector and board, undo screws 3.5 and pull off the carrier. **Please also note the hints on page 4.**

Other parts than those mentioned in the parts list are not available.

Zerlegen des Kapselteiles

Um an die Teile der Kapsel zu gelangen, oder zum Tausch der Kappe 1 halten Sie das Mikrofon in einer Hand und drücken mit dem Daumen fest gegen die Frontseite der Kappe. Die Kappe ist durch eine Feder 9 mechanisch vorgespannt und eine größere Kraft ist notwendig, um sie in der ursprünglichen Position zu halten. Nun lösen Sie die vier Schrauben 10. **Achtung, Gefahr:** Während dieser Tätigkeit niemals die Kappe 1 auslassen. Andernfalls kann durch die Feder 9 nach lösen der vierten Schraube die Kappe plötzlich weggeschleudert werden, was Beschädigungen oder Verletzungen zur Folge haben kann. Nachdem die Schrauben 10 entfernt wurden, lassen Sie die Kappe 1 langsam und vorsichtig aus und nehmen Sie diese mit den Teilen der Kapsel vom Gehäuseohr 2 ab. Die Elektrode 6 kann an der Feder 9 aus der Kappe gezogen werden. Berühren Sie bitte niemals die Elektrodenfläche mit bloßen Fingern und vermeiden Sie

überhaupt jeglichen mechanischen Kontakt. Die Membrane 7 liegt lose in der Kappe und ihre Oberfläche darf niemals berührt werden. Nehmen Sie den Teil mit höchstmöglicher Vorsicht und nur am Rand des Membranringes, ohne diesen zu verbiegen.

Im Inneren des vorderen Teiles der Kappe 1 ist ein Isolationsstreifen 8 eingelegt, wo die hochohmigen Teile der Kapsel nahe zur Innenwandung der Kappe stehen (Fig. 1 auf Seite 2). Beim Tausch der Kappe 1 muß dieser Streifen unbedingt entweder ersetzt, oder jener aus der zu tauschenden Kappe wieder verwendet werden. Er ist nicht in der Ersatzkappe 1 enthalten.

Das Einlegen dieses Streifens hat sehr sorgfältig zu erfolgen. Der Streifen muß sich über seine gesamte Fläche an die Innenwandung der Kappe schmiegen. Dieser Vorgang wird erleichtert, wenn zuerst die Membran 7 eingelegt und der Streifen dann um den Membranring geschlungen wird. Allerdings steigt damit die Gefahr einer unabsichtlichen Beschädigung der Membrane.

Die Kappe 1 enthält bereits Gitter 1.2 und Gitterhülse 1.1. Letztere ist mit leitfähigem Zweikomponentenkleber an der Kappe angeheftet. Falls eine neue Gitterhülse 1.1 eingesetzt wird, sollte diese Klebung ebenfalls angebracht werden.

Tausch des Verstärkerprints

Falls lediglich der Verstärker oder Teile davon getauscht werden sollen, ist es nicht notwendig die Kappe 1 zu entfernen. Pressen Sie das Mikrofon mit dem Steckerende fest gegen eine plane Oberfläche gegen die Kraft der Feder und lösen Sie die Schraube. Ziehen Sie den Verstärker 3 aus dem Gehäuse. Um den Kontaktträger 3.4 zu ersetzen, entfernen Sie sorgfältig das Lötzinn von der Verbindungsstelle zwischen Kapselkontakt und Print, lösen Sie die beiden Schrauben 3.5 und ziehen Sie den Kontaktträger ab. **Bitte beachten Sie auch die Hinweise auf Seite 4.**

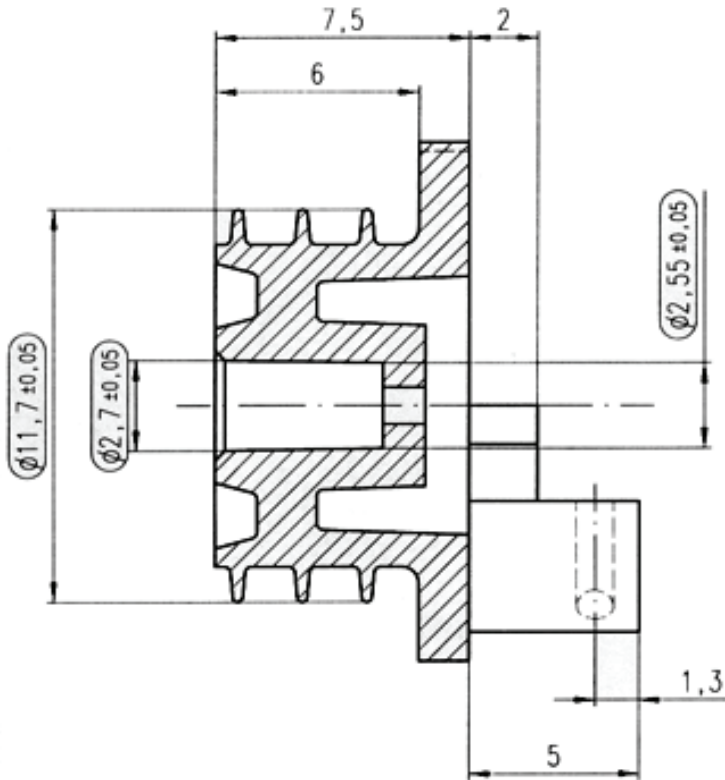
Andere Teile als in der Stückliste angegeben, sind nicht erhältlich.

Technical Specs

Transducer type: backelectret pressure gradient condenser capsule
Polar pattern: cardioid
Transmission range: 20...20.000 Hz
Sensitivity, unloaded: 9,0 mV/Pa (-41 dB)
Capsule capacity: 36 pF
Impedance: 200 Ohms @ 100...20.000 Hz
Nominal load: > 2.000 Ohms
Equivalent noise level: ... dBA DIN 45412
Weighted noise level: ... μ Veff DIN45412, IEC 651
Current drain: ... mA @ 48 Volts
Temperature range: -10°C ... +60°C
Rel. humidity: <99% @ +20°C (68°F); <95% @ +60°C
Weight: 125 g
Complies with EN50082-1 (1997) at criterion A: S/N > 15 dBA

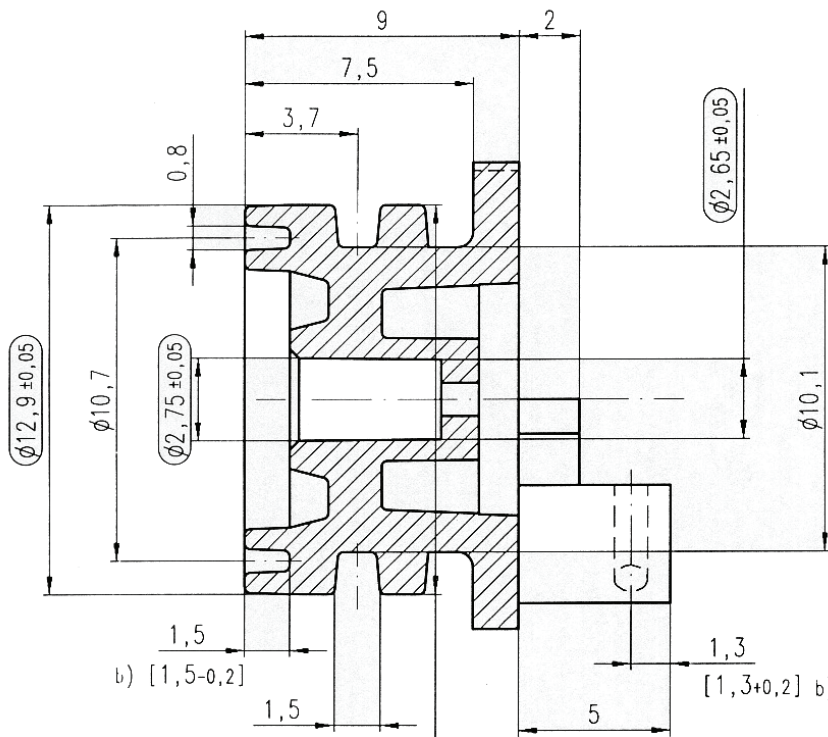
Technische Daten

Wandlerart: Backelectret Druckgradienten - Kondensatorkapsel
Richtcharakteristik: Cardioide
Übertragungsbereich: 20...20.000 Hz
Leerlaufübertragungsfaktor: 9,0 mV/Pa (-41 dB)
Kapselkapazität: 36 pF
Impedanz: 200 Ohms @ 100...20.000 Hz
Nennbelastbarkeit: > 2.000 Ohms
Äquivalentschalldruckpegel: ... dBA DIN 45412
Störspannung, bewertet: ... μ Veff DIN45412, IEC 651
Stromaufnahme: ... mA @ 48 Volts
Temperaturbereich: -10°C ... +60°C
Rel. Feuchte: <99% @ +20°C (68°F); <95% @ +60°C
Gewicht: 125 g
Entspricht EN50082-1 (1997) bei Bewertungskriterium A: S/N > 15 dBA



This insulation bushing has the part number 2895Z0901 and is used in the **former** version of the contact carrier 2895M0201. It is made of transparent plastic material. The part can only be used together with the housing tube **2895Z2501**.

Diese Isolierhülse hat die Teilenummer 2895Z0901, wird in der **früheren** Version des Kontaktträgers 2895M0201 verwendet und ist aus weißem Kunststoff gefertigt. Dieser Teil ist nur zusammen mit Hüllrohr **2895Z2501** zu verwenden.



This insulation bushing has the part number 2895Z0902 and is used in the **new** version of the contact carrier 2895M0201. It is made of white plastic material. The part can only be used together with the housing tube **2895Z0501**.

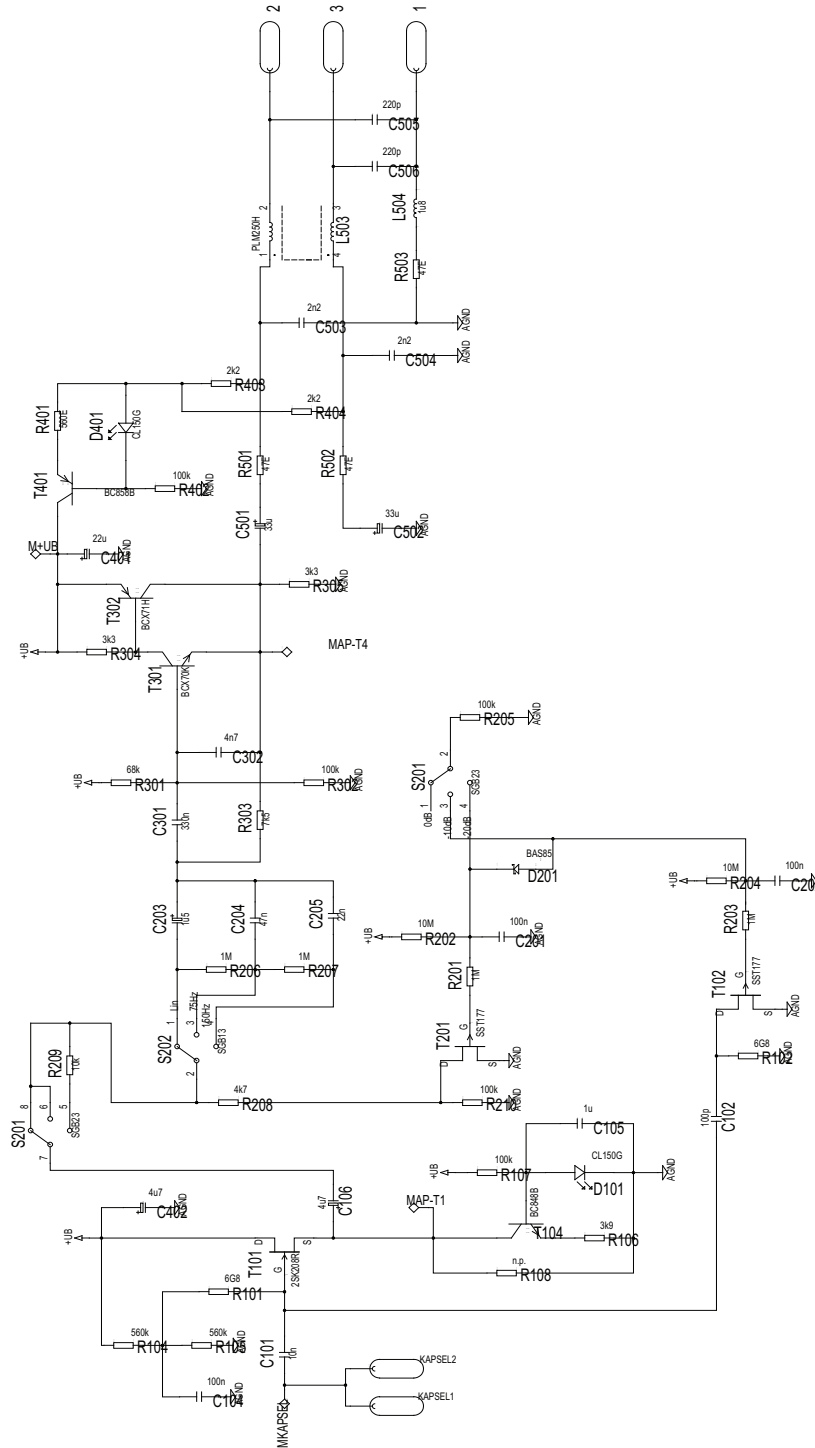
Diese Isolierhülse hat die Teilenummer 2895Z0902, wird in der **neuen** Version des Kontaktträgers 2895M0201 verwendet und ist aus weißem Kunststoff gefertigt. Dieser Teil ist nur zusammen mit Hüllrohr **2895Z0501** zu verwenden.

Schematics

For better understanding of the technical design aspects the schematics is shown below. Other parts than those mentioned in the part list are not available.

Schaltung

Zum Verständnis der technischen Zusammenhänge ist hier die Schaltung gezeigt. Andere Teile als in der Stückliste angegeben, sind nicht erhältlich.



WARRANTY CONDITIONS

Valid in all countries except in the United States of America and Canada:

AKG warrants AKG products and Crown products against evident defects in material and workmanship for a period of two years from the date of original purchase for use. This warranty does not cover electrical or mechanical damage resulting from misuse or abuse, lack of reasonable care, damage due to force majeure or natural forces, or inadequate repairs performed by unauthorized service centers.

Batteries and wear of parts due to normal use are not covered by this warranty.

Performance of repairs or replacements under this Warranty is subject to submission of this warranty card, completed and signed by the dealer on the day of purchase, or the sales slip. Shipment of the defective item for repair under this warranty will be at the customer's own risk and expense. This warranty is valid for the original purchaser as the final user only. AKG Acoustics GmbH will, at AKG Acoustics GmbH's option, repair or replace items returned for repair under this Warranty.

Guarantee service is available only in the region of original purchase.

AKG Acoustics GmbH warrants specific condenser microphone models and Crown microphone models for a period of three (3) years from the date of purchase.

These models are:

C451 B all models

C480 B, B-ULS and all ULS capsules

C12 VR

C414 all models

C214 all models

C314

CM311A

CM311L

CM311AESH

MB3

MB4

PCC130

PCC130SW

PCC160

PCC170

PCC170SW

PCC170SWO

PZM10

PZM10LL

PZM11

PZM11LL

PZM11LLWR

PZM185

PZM30D
PZM6D
SOUNDGRABBER2

In some countries, product liability legislation may give you other rights beyond the scope of this warranty card. Where this applies, such rights shall replace the rights and conditions stated in this warranty card.

Please send your claims to the dealer you purchased the product from, or to the AKG Distributor for your country. To find your nearest AKG Representative, visit www.akg.com/distributors.

Limited Warranty valid United States of America (*) and Canada ():**

AKG Acoustics warrants AKG products against defects in material or workmanship for a period of two years from the date of original purchase, and agrees to repair or, at our option replace any defective unit without charge for either parts or labor. AKG grants a three-year warranty covering select products mainly studio and boundary layer microphones (see list of products above) against defects in material and workmanship. This warranty is valid for AKG or AKG/CROWN products purchased and delivered within the United States (*) / Canada (**) for the original purchaser only. The purchaser's Bill of Sale will serve as proof of sale and warranty validity in the U.S (*) / Canada (**). Shipment of defective items to AKG for repair will be at the customer's own risk and expense. AKG will assume the return shipping cost for all items repaired under warranty.

IMPORTANT: This warranty does not cover damage resulting from accident, misuse or abuse, lack of reasonable care, the affixing of any attachment not provided with the product, loss of parts, or connecting the product to any receptacle other than specified.

This warranty is void unless AKG Acoustics, U.S.'s service center() / the authorized AKG Service Center of Canada (**) performs the repair. No responsibility is assumed for any special, incidental or consequential damages caused by the consumer. However, the limitation of any right or remedy shall not be effective where law prohibits such.*

General Return Procedures for US AKG Service

SA# IS REQUIRED for AKG repair service. Please call (818) 895-3377 and request a service authorization prior to sending out any repairs. Please be sure to attach the SA# on the outside of any repair you send in. This step will enable us to determine where your particular repair will need to be sent to insure that nothing gets lost.

RA# is REQUIRED for AKG credit returns. Please contact HProreturns@harman.com and request a return authorization prior to returning any AKG purchases. Please be sure to attach the RA# on the outside of any returns you send in. This step will insure that the return procedure is completed smoothly.

All AKG customer-owned products being returned for warranty service must include a copy of the customer's bill-of-sale. Warranty approvals will not be granted if an original receipt or copy of a receipt is not enclosed.

Please enclose a note explaining the symptom or difficulties observed with the product's performance.

Also, include a contact name, the street address for return shipping and a daytime phone number should AKG need to contact you regarding your repair.