In spring, 1987, Billboard magazine polled more than 1,000 sound recording studios around the world about their recording equipment; the most cited name for microphones and headphones was AKG. This is the fruit of 40 years of intense research and development and the resulting experience in the field of acoustic transducers. Over 1,300 patents held by AKG prove this fact.

Another case in point is the quality of AKG products. A high output—every second AKG makes one microphone, headphone, or other transducer—provides the quality guaranteed by large scale production.

AKG has sales and service representatives in more than 100 countries. Your AKG dealer, your nearest AKG representative, or our staff at AKG Vienna will be glad to demonstrate all AKG products available.

There is little we could write about the sonic quality of AKG products. We know that you as a musician or sound engineer can trust your ears. We also know that you require even more of a good stage microphone: absolute ruggedness and reliability. AKG microphones are subjected to in-house tests under extreme conditions including simulated tropical and arctic environments as well as brute force as each AKG vocal microphone must survive a 6-ft. drop. All this is reflected in its construction. Just unscrew the cap of, say, a D330. Beneath the unusually strong wire mesh grille, you will find an additional, high-strength plastic protective basket.

Details like these are expensive. But they make sure AKG microphones will work when they're needed, even after years of abuse.
The recommendations in this catalog are based on the input from musicians and sound engineers from all over the world. We have drawn on their experience to assist you in making your choice — and in using your microphones creatively.

Our microphones are categorized as vocal, studio, bass microphones, etc., according to their main applications. Of course, vocal microphones may also be used for miking up any one playing, recording, or producing music today is faced with new technologies ranging from sampling and MIDI to sequencer programming and automated mixing. Knowledge of microphones and their optimal use begins to diminish.

But the success of a record often depends on well-recorded vocals, and poor stage sound and feedback problems are commonly caused by low-quality or improperly used microphones. This catalog intends to give you helpful hints on how to use microphones.

Microphone choice is determined by the instrument to be picked up, the playing technique, room acoustics, and sonic preferences. It is a very personal decision and largely a matter of taste what microphone will be used for a given instrument.

Sound Service
Brunnbergasse 1,
A-1150 Wien
Austria
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- C 422 comb Stereo Microphone
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- C 335 Vocal Microphone
- C 562 BL Boundary Layer Microphone
- C 567 E1 Miniature Microphone + CK 67/3, CK 67/B9, CK 67/13
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- C 1000 S Vocal Microphone
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- D 58 Gooseneck Microphone
- D 70 Vocal Microphone
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- D 90-S Instrument Microphone
- D 95 S Vocal Microphone
- D 109 Lavalier Microphone
- D 112 Bass Microphone
- D 125 Instrument Microphone
- D 130 Omnidirectional Microphone
- D 190 Instrument Microphone
- D 202 Studio Microphone
- D 222 Instrument Microphone
- D 224 Studio Microphone
- D 310 Vocal Microphone
- D 321 Vocal Microphone
- D 900 Instrument Microphone
- D 510, D 541, D 558, D 590 Gooseneck Microphones

INTERCOM HEADSETS
- Q 15, Q 24, Q 34, Q 35 Headsets

WMS WIRELESS MICROPHONES
- Complete Wireless Systems
- D 311 WL, D 330 WL, C 535 WL Microphone Elements
- PT 42, 10 Pocket Transmitter
- T 85 Handheld Transmitter
- SR 42 Receiver
- SR 85 Receiver
- T 185 Handheld Transmitter
- SR 185 Receiver

HEADPHONES
- K 109 S, K 141 Headphones
- K 240 Monitor, K 240 DF Studio Monitor
- K 270, K 280 Headphones

EFFECTS UNITS
- ADR 68 K Digital Reverb and Effects Processor
- BX 25 ED Analog Reverberator
- TDU 8000 Time Delay Unit

MONITOR LOUDSPEAKER
- LSM 50

ACCESSORIES

MICROPHONES IN THEORY AND PRACTICE

AKG PATENTS

MICROPHONE ACCESSORIES GUIDE
USING MICROPHONES IN THE STUDIO

**Speech:**
C 414 B-USS, C 535, C 562, C 567, C 747, D 222

**Lead Vocals:**
C 414 B-USS, Tube, C 535, C 460 B-USS, C 1000

**Backing Vocals:**
C 422, C 34, C 414 B-USS, C 535

**Acoustic Guitar:**
C 414 B-USS, C 567, C 747, D 224

**Electric Guitar:**
D 125, D 12, C 451/CK 1

**Electric Bass:**
D 12, D 112

**Double Bass:**
C 414 B-USS, C 460 B-USS/61, 63, D 222

**Cello:**
C 414 B-USS, C 460 B-USS/61, 63 C 567, C 747, D 222

**Violin:**
C 414 B-USS, C 460 B-USS/61, 63, C 567, C 747, D 222

**Zither:**
C 460 B-USS/61, 63, C 747, D 224, C 567

**Leslie:**
Top: 2 x D 224, 2 x D 125
Bottom: D 12, D 112

**Upright Piano:**
2 x C 567, 2 x C 460 B-USS/61, D 202 + 224
Choosing microphones is largely a matter of taste, particularly in the studio. The models recommended here have proven their value in many recording sessions. Recommendations cover different price brackets, not only because we had the smaller studios in mind, too, but also because in some situations a less expensive microphone may actually sound better — the decision must be up to your ears. In the studio, condenser microphones are usually preferred, especially for working distances longer than 8 in. (20 cm).

For more details on microphones, how they work and how to use them for best results in the studio and on stage, get a copy of the book "Microphones" by Norbert Pawera.

Grand Piano:
- Classical: C 414 B·ULS
- Rock/Jazz: 2 x C 414 B·ULS, 2 x C 567, 2 x C 562

Tuba:
- C 414 B·ULS, C 535, C 567

French Horn:
- C 414 B·ULS, C 535

Trombone:
- C 414 B·ULS, C 535, D 12

Saxophone:
- C 414 B·ULS, C 451/CK5, C 535, C 567, C 747

Clarinet:
- C 414 B·ULS, C 451/CK5, C 747

Flute:
- C 414 B·ULS, C 460 B·ULS/61, C 567, C 535

French Horn:
- C 414 B·ULS, C 535

Trumpet:
- C 414 B·ULS, C 451/CK5, D 125

Bongos:
- C 460 B·ULS/61, D 224, D 125

Harmonica:
- C 414 B·ULS, C 535, D 330

Congas:
- C 460 B·ULS/61, D 202 E1, D 125

Bass Drum:
- D 12, D 222 E1, D 112

Snare Drum:
- C 460 B·ULS/61, D 224, D 125

Hi-hat:
- C 460 B·ULS/61, C 535, D 224

Cymbals:
- C 414 B·ULS, C 460 B·ULS/61, C 535, C 568, D 224

Tom-toms:
- D 202 E1, D 321, C 414 B·ULS
USING MICROPHONES ON STAGE

Speech:
D 222, D 125

Solo and Backing Vocals:
D 330, D 321, D 310, C 1000

Acoustic Guitar:
D 224, D 1200,
Ck 67/89,
C 401/89 + C 402/8

Steel String Guitar:
D 330, D 321,
C 401/89 + C 402/8

Electric Guitar:
D 125, D 1200, D 12

Electric Bass:
D 112, D 12

Double Bass:
D 12, D 112,
D 222

Cello:
C 1000, D 222,
Ck 67/89, C 401/89 + C 402/8

Violin:
C 1000, D 222,
Ck 67/89, C 401/89 + C 402/8
For many years AKG has been providing hints for choosing the right microphone for every instrument, a job that has become more difficult each year. This is because more and more different mics are becoming available and the instrument is no longer the only criterion. Others include phantom power, budget, required freedom of movement on stage, etc.

Therefore, the D 70, D 80, D 90, and D 95 vocal microphones are not included in the chart below because their uses coincide with those of the D 310. All mics listed, except for the C 562 and C 451 (grand and upright pianos) require no phantom power.

- **Grand Piano:**
  - 2 x C 451/CK1
  - 2 x C 562
  - D 222 + D 224
  - 2 x CK 67/89

- **Upright Piano:**
  - 2 x C 451/CK1
  - 2 x CK 67/89
  - D 222 + D 125, 2 x C 562

- **Accordian:**
  - D 190, D 1200, 2 x C 451/CK1

- **Zither:**
  - D 125, CK 67/89, C 401/89 + C 409/B

- **Trumpet:**
  - D 1200, D 310,
  - D 321, C 409/B

- **French Horn:**
  - D 12, D 1200,
  - C 1000, C 409/B

- **Trombone:**
  - D 12, D 1200,
  - C 1000, C 409/B

- **Tuba:**
  - D 12, D 112,
  - D 1200, C 409/B

- **Clarinet:**
  - D 1200, D 125,
  - C 1000

- **Saxophone:**
  - D 1200, D 310,
  - D 321, C 409/B

- **Flute:**
  - D 310, D 321,
  - CK 67/89

- **Harmonica:**
  - D 310, D 321,
  - D 330
Vibraphone, Xylophone:
D 190, C 1000

Congas, Bongos:
D 310, D 125,
D 190, C 408/8

Hi-hat:
C 1000, D 224

Snare Drum:
D 1200, D 125,
C 408/8

Cymbals:
2 x C 1000
2 x D 224

Tom-toms:
D 190, D 125,
D 310, C 408/8

Bass Drum:
D 12, D 112,
D 125
Tube (valve) microphones have been appreciated by studio engineers for their warm sound and the legendary AKG C 12 has become a much sought-after collector's item. The AKG Tube provides audiophile sound engineers with a classical tube design combined with '80s standard components.

The circuit design of the C 12 using a specially selected 6072 tube has been retained. Two switches, for 10 dB sensitivity boost and 10 or 20 dB pre-attenuation, have been added. The Tube is powered by a dedicated AC power supply with polar pattern selector and bass roll-off/cut-off controls. Nine different polar patterns are selectable: omnidirectional, cardioid, figure 8, and six intermediate stages.

The Tube gives the warm sound associated with tube microphones. This perceived sound characteristic has been very popular for vocals and solos.

**STANDARD ACCESSORIES**

- W 42 Foam windscreen
- H 15 T Elastic suspension
- MX Tube Connecting cord (10 m/33 ft)
- N-Tube AC power supply
- Aluminum carrying case

**OPTIONAL ACCESSORIES**

- FF 20 "Stalking type" pop screen
- MK 9/10 Cable
- St 102 Boom stand

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Polar Pattern</th>
<th>omni-directional, cardioid, figure 8, and 6 intermediate stages, remote controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>30 – 20,000 Hz</td>
</tr>
<tr>
<td>Sensitivity:</td>
<td>10 mV/Pa</td>
</tr>
<tr>
<td>Impedance:</td>
<td>200 ohms</td>
</tr>
<tr>
<td>Equivalent Noise Level:</td>
<td>22 dB (DIN 45412-A), 32 dB (CCIR 468-2)</td>
</tr>
<tr>
<td>S/N Ratio:</td>
<td>72 dB</td>
</tr>
<tr>
<td>Max. SPL for 0.5% THD:</td>
<td>128 dB</td>
</tr>
<tr>
<td>Size:</td>
<td>42 Ø x 225 mm (1.7 ø x 8.9 in)</td>
</tr>
<tr>
<td>Net/Shipping Weight:</td>
<td>680 g/4.5 kg (24 oz./10 lbs.)</td>
</tr>
</tbody>
</table>

- Cardioid
- Omni-directional
- Figure 8
Two CK 1 type diaphragm elements are mounted one above the other. The top element may be rotated through 270° to permit MS and XY recording with adjustable stereo base angles.

The S 42 E remote control enables 9 polar patterns to be selected for each channel: omnidirectional, cardioid, figure 8, and six intermediate stages. Switching causes no noise or change in sensitivity and thus can be done while recording.

The C 34 needs a phantom power source. The case is finished in matte black.

**STANDARD ACCESSORIES**
- W 34 Foam windscreen
- H 15/6 Elastic suspension
- S 42 E Remote control
- MK 42/20 Connecting cord (20 m /66 ft.) for S 42 E
- Carrying case

**OPTIONAL ACCESSORIES**
- N 62, N 66 AC power supplies
- B 18 Battery power supply (two required)
- MK 9/10 Cable
- S 102 Boom stand

**SPECIFICATIONS**

- **Polar Pattern:** omnidirectional, cardioid, figure 8, and 6 intermediate stages
- **Frequency Range:** 20 – 20,000 Hz
- **Sensitivity:** 4.5 mV/Pa
- **Impedance:** 200 ohms
- **Equivalent Noise Level:** 32 dB (CCIR 468-2) / 22 dB A (DIN 45412-A)
- **S/N Ratio:** 72 dB
- **Max. SPL for 0.5% THD:** 132 dB
- **Crosstalk Rejection:**
  - 70 dB (20 Hz – 10 kHz)
  - 40 dB (20 Hz – 15 kHz)
- **Size:** 33/25 Ø x 196 mm (1.1/1 Ø x 7.7 in.)
- **Net/Shipping Weight:** 280 g/2 kg (10 oz/4.4 lbs.)

- **Omnidirectional**
- **Cardioid**
- **Figure 8**

**C 34 comb**

STEREO MICROPHONE

Of the two AKG studio stereo microphones, the C 34 sounds brighter, the C 422 mellower.
C 401/B 9 comb

PICKUP

There are two basic approaches to miking up an acoustic guitar on stage. While microphones provide a natural sound at a higher feedback risk, piezo pickups installed in the bridge offer high gain before feedback but tend to degrade the typical acoustic guitar sound.

With the C 401 contact microphone, you'll get the best of both worlds. High sonic quality condenser transducer ensures excellent high frequency response, direct vibration pickup from the soundboard accounts for high gain before feedback.

SPECIFICATIONS

- Polar Pattern: figure 8 (vibration pickup)
- Frequency Range: 10 - 10,000 Hz
- Sensitivity: 30 mV/msec -1 (vibration pickup)
- Impedance: 200 ohms
- Connector: 3.5 mm mono jack plug
- Size: 26 x 11.5 x 8.5 mm (1 x 0.5 x 0.3 in.)
- Net/Shipping Weight: 8/140 g (0.3/4.9 oz.)

C 402/B

MINIATURE MICROPHONE


SPECIFICATIONS

- Polar Pattern: cardioid
- Frequency Range: 2,500 - 20,000 Hz
- Sensitivity: 13 mV/Pa
- Impedance: 200 ohms
- Connector: 3.5 mm mono jack plug
- Size: 26 x 11.5 x 8.5 mm (1 x 0.5 x 0.3 in.)
- Net/Shipping Weight: 8/140 g (0.3/4.9 oz.)

For authentic acoustic sounds, New Age sounds, folk, or jazz. Besides guitar, uses include violin, banjo, sitar, zither, and other string instruments.

The supplied B 9 battery power supply contains a continuous volume control.

Note:
The C 401, C 402, C 409, and C 410 microphones are also available without the B 9 battery power supply (C 4../B).

STANDARD ACCESSORIES

B 9 Battery power supply
Adhesive compound

STANDARD ACCESSORIES

Adhesive compound
H 402 Mounting plate

Note:
The C 401, C 408, C 409, and C 410 microphones are also available without the B 9 battery power supply (C 4../B).
Miniaturized condenser microphone with frequency response tailored to percussion instruments.

The C 408 with its model D 112 shape is no gizmo! Simply clamps on the top hoop of the drum. Response optimized for drums. Special mic for tom-toms, snare drum, bongos, congas, and timbales.

The B 9 feeds two C 408s and allows the balance between these, and overall volume, to be adjusted. Mixing two mics down to one output saves one mixer input, an ideal technique for a pair of congas, bongos, or two tom-toms.

**SPECIFICATIONS**

- **Polar Pattern:** hypercardioid
- **Frequency Range:** 80 - 20,000 Hz
- **Sensitivity:** 5 mV/Pa
- **Impedance:** 200 ohms
- **Connector:** 3.5 mm mono jack plug
- **Size:** approx. 75 x 35 mm (3 x 1.4 in.) incl. of clamp
- **Net/Shipping Weight:** 40/300 g (1.4/10.6 oz.)

**STANDARD ACCESSORIES**

- B 9 Battery power supply
- W 44 Windscreen

**B 9**

The B 9 has one 1/4" output jack and two 3.5 mm input jacks to feed two C 401, C 402, C 408, C 409, or C 410 microphones. Balance and master volume controls. 9 V battery not included.
C 409/B 9 comb
INSTRUMENT MICROPHONE

Miniature condenser microphone that clamps on the instrument. Short gooseneck for precise alignment.

Room to move for horn players at last! Clamp the C 409 on the bell of your horn and forget about constantly checking the right working distance. A word of warning: A constant working distance means you have to watch your dynamic range – perfect results from the C 409 may require an initial learning phase.

The supplied battery power supply (with belt clip) provides a volume control.

STANDARD ACCESSORIES
B 9 Battery power supply
W 44 Windscreem

SPECIFICATIONS
Polar Pattern: hypercardioid
Frequency Range: 20 – 20,000 Hz
Sensitivity: 10 mV/Pa
Impedance: 200 ohms
Connector: 3.5 mm mono jack plug
Size: approx. 160 x 35 mm (5.7 x 1.4 in.) incl. of clamp
Net/Shipping Weight: 45/300 g (1.6/10.6 oz.)
C410
HEADSET MICROPHONE

Miniature condenser microphone with headband type suspension
Extremely lightweight: just 30 g (1.1 oz.) without cable. Detachable windscreen. Available on request with small earphones for monitoring.

For singing drummers, keyboarders, etc. Condenser design ensures uncolored reproduction of high frequency detail. Thanks to featherweight plastic construction, the C 410 will be easy on your head even after hours into the session.

STANDARD ACCESSORIES
W 410 Windscreen

OPTIONAL ACCESSORIES
B 18 Battery power supply
MK 8/9 Cable

SPECIFICATIONS
Polar Pattern: cardioid
Frequency Range: 20 – 20,000 Hz.
Sensitivity: 3 mV/Pa
Impedance: 200 ohms
Size: approx. 130 mm (5.1 in.) Ø, cable length: 3.5 m (11 ft. 6 in.)

Net/Shipping Weight: 130 g (4.6 oz./13 oz.)

C 410/B 9
C 410 complete with 9 V battery power supply. No phantom power required. Continuous volume control. (3.5 mm mono jack plug)

C 410 WL
Large diaphragm microphone with four selectable polar patterns. Switchable 0, -10, -20 dB preattenuation and bass roll-off (75 and 150 Hz, 12 dB/octave). All-metal case for RF shielding.

The C 414 has been used for years as an all purpose studio microphone for vocal and instrument recording. The levels it will reproduce distortion free are extremely high for a condenser microphone: 140 dB (160 dB with pad switched in) at 1 kHz and 134/154 dB over the wide band from 30 to 20,000 Hz! Therefore, the C 414 is often chosen for the bass drum or tom-toms.

With a dynamic range of 126 dB, the C 414 B-ULS already fulfills the requirements of future digital studio technology.

Demanding sound engineers have been using the C 414 on stage, too, for overheads, grand piano, or wind instruments.

STANDARD ACCESSORIES
SA 18/3B Stand adapter
W 26 Foam windscren

OPTIONAL ACCESSORIES
H 17 A Elastic suspension/windscreen
PF 20 "Stocking type" pop screen
B 18 Battery power supply
N 62, N 66 AC power supplies
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand
SPECIFICATIONS

Polar Pattern: cardioid, hypercardioid, omnidirectional, figure 8

Frequency Range: 20 – 20,000 Hz

Sensitivity: 12.5 mV/Pa (all polar patterns)

Impedance: 180 ohms

Equivalent Noise Level: 25 dB (CCIR 468-2)
14 dB-A (DIN 45412-A)

S/N Ratio: 60 dB

Max. SPL for 0.5% THD: 140 dB (160 dB at -20 dB)

Dynamic Range: 126 dB min.

Size: 141 x 45 x 35 mm (5.6 x 1.8 x 1.4 in.)

Net/Shipping Weight: 310 g/380 g (11/13.4 oz.)

**C 414B-TL**

Transformerless version of the C 414 B-ULS. Some sound engineers prefer this version without a limiting output transformer for its powerful low frequency reproduction.
STEREO MICROPHONE

Stereo microphone with two vertically stacked twin diaphragm elements (CX 12 large diaphragm capsules as used in the C 414 B-UlS).

The upper transducer can be rotated through 270° with respect to the lower one for adjustment to different stereo base angles.

The entire microphone head is rotatable through 45° permitting a quick change from MS to XY recording when the microphone is fixed to the stand adapter or spider suspension. Two narrow beam LEDs mounted on the sound entry side of the two capsules enable the base angle to be checked immediately, even from a distance, in a concert hall or studio. The LEDs are powered from the S 42 E remote control, by either a conventional or a rechargeable 9-V battery which may be continuously charged by the phantom supply via a trickle charge circuit.

The 10 and 20 dB preattenuation pads for each channel can be switched in and out by a common switch. A threaded hole on the microphone shaft accepts the knurled head fixing screw on the H 15/9 spider suspension. The case is finished matte black. Three basic polar patterns (omnidirectional, cardioid, figure 8) and 6 intermediate stages per channel can be selected on the remote control.

STANDARD ACCESSORIES

W 42 Foam windshield
H 15/9 Spider suspension
S 42 E Remote control
MK 42/20 Connecting cord for S 42 E (20 m/66 ft.)
Carrying case

OPTIONAL ACCESSORIES

N 60, N 66 AC power supplies
B 18 Battery power supply (two required)
MK 9/10 Cable
St 102 Boom stand
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>omnidirectional, cardioid, figure 8, and 6 intermediate stages</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>20 – 20,000 Hz ± 2.5 dB from specified curve</td>
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<tr>
<td>Sensitivity</td>
<td>6 mV/Pa</td>
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<tr>
<td>Impedance</td>
<td>200 ohms</td>
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<tr>
<td>Equivalent Noise Level</td>
<td>30 dB (CCIR 468-2)</td>
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<tr>
<td></td>
<td>19 dB-A (DIN 45412-A)</td>
</tr>
<tr>
<td>SN Ratio</td>
<td>75 dB</td>
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<tr>
<td>Current Consumption</td>
<td>≤5 mA per channel</td>
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<tr>
<td>Max. SPL for 0.5% THD</td>
<td>133 dB</td>
</tr>
<tr>
<td>Crosstalk Rejection</td>
<td>≥70 dB (20 Hz – 10 kHz)</td>
</tr>
<tr>
<td></td>
<td>≥40 dB (20 Hz – 15 kHz)</td>
</tr>
<tr>
<td>Size</td>
<td>43/33 Ø x 236 mm (1.7/1.3 Ø x 9.3 in)</td>
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<tr>
<td>Net/Shipping Weight</td>
<td>450 g/1.2 kg (16 oz./4.4 lbs)</td>
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</tbody>
</table>

![Polar Patterns](image_url)
Each CMS microphone consists of a condenser capsule screwed on a shaft containing the preamplifier. A range of interchangeable capsules with different polar patterns is available. For instance, one CMS microphone plus several capsules with different polar patterns make a versatile tool for overdubs.

Each "comb" package contains a complete rod shaped studio microphone consisting of one CK capsule, one C 451 or C 450 B preamplifier, and various accessories.

The preamplifier and capsules are also available separately and may be combined as desired.

The CK 1, CK 3, CK 5, CK 8, CK 9!* and CK 22 capsules screw directly on the C 451 and — via the A 60 adapter — the C 450 B.

The CK 1 X, CK 2 X, CK 3 X, and CK 8 X connect to the C 460 B preamplifier via an extension cable. The capsules can thus be set up away from the more bulky preamplifiers to provide high quality sound with minimum visual interference in film, TV, and theater applications.

The interchangeability of CMS capsules allows many different types of applications to be covered and creative mixing techniques to be tried with relatively few components.

* CK 9 needs modifying to accommodate C 460 B
For high level applications (drums, wind instruments), the A 50 attenuation pad may be screwed in between the capsule and the C 451. The A 51 swivel enables the capsule to be angled away from the preamp axis - ideal, e.g., for optimum placement for the snare drum.

The C 451 EB comb has become a studio standard microphone. Preferred applications include acoustic instruments such as cymbals, grand piano, string instruments. Being rugged, it is frequently used on stage for overheads, hi-hat, or snare drum.

**PACKAGE**
- CK 1 Condenser capsule
- C 451 EB Preamplifier
- SA 40 Stand adapter
- W 32 Foam windscreens

**OPTIONAL ACCESSORIES**
- H 30 Shock-mount stand adapter
- B 18 Battery power supply
- H 60, N 66 AC power supplies
- Mk 9/10 Cable
- St 102 Boom stand

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
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<tbody>
<tr>
<td>Polar Pattern</td>
<td>Cardioid</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>20 - 20,000 Hz</td>
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<tr>
<td>Sensitivity</td>
<td>9.5 mV/Pa</td>
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<tr>
<td>Impedance</td>
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<td>Equivalent Noise Level</td>
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<td></td>
<td>18 dB-A (DIN 45412-A)</td>
</tr>
<tr>
<td>S/N Ratio</td>
<td>76 dB</td>
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<tr>
<td>Size</td>
<td>18 Ø x 159 mm (0.7 Ø x 6.3 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>80350 g (18/12.3 oz.)</td>
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</tbody>
</table>

**C 451EBcomb**

STUDIO MICROPHONE

Same as C 451 EB comb, except without bass roll-off switch.

Nickel plated finish. 18 Ø x 143 mm (0.7 Ø x 5.6 in.)

**C 451EB**

PREAMPLIFIER

Same as C 451 EB comb, except without CK 1 capsule. Matte black.

18 Ø x 136 mm (0.7 Ø x 5.4 in.)
The heart of this "Ultra Linear Series" cardioid microphone is the C 460 B preamplifier. What sets it apart is the absolute linearity of all important parameters such as frequency response, directivity factor, electrical transfer characteristics, as well as low self-noise and a high overload margin. A specially designed output stage will drive all types of loads encountered in day-to-day work, including excessively long cables, without any noticeable signal degradation.

Switchable 70/150 Hz, 12 dB/octave bass-cut. Switchable 10 dB output level attenuation. This pad is post the input stage and thus ensures continued performance to specifications. For close-up miking of very loud instruments (snare and bass drums) the A 60 adapter allows a CK 1 capsule and A 50 pad to be screwed on the preamp.

**PACKAGE**

CK 61-ULS Condenser capsule
C 460 B Pre amplifier
SA 40 Stand adapter
W 32 Foam windscreen

**OPTIONAL ACCESSORIES**

A 61 Swivel
VR 61 30-cm (1 ft.) extension tube
VR 62 90-cm (3 ft.) extension tube
SA 18/2 B All-metal stand adapter
W 46 Wire mesh windscreen
H 30 Shock-mount stand adapter
B 16 Battery power supply
N 52, N 66 AC power supplies
MK 9/10 Cable
S 1/2 Boom stand

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Polar Pattern:</th>
<th>Cardioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>20 - 20,000 Hz</td>
</tr>
<tr>
<td>Sensitivity:</td>
<td>8 mV/Pa</td>
</tr>
<tr>
<td>Impedance:</td>
<td>120 ohms</td>
</tr>
<tr>
<td>Equivalent Noise Level:</td>
<td>25 dB (CCIR 468.2)</td>
</tr>
<tr>
<td>SIN Ratio:</td>
<td>80 dB</td>
</tr>
<tr>
<td>Max. SPL for 0.5% THD:</td>
<td>134 dB from 30 Hz to 20 kHz</td>
</tr>
<tr>
<td>Size:</td>
<td>21 Ø x 173 mm (0.8 Ø x 6.8 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight:</td>
<td>140/500 g (4.9 oz./1.1 lbs.)</td>
</tr>
</tbody>
</table>

The C 460 B comb-ULS sounds somewhat less bright than microphones with a CK 1 capsule. Therefore, CK 1's are often used for distant miking. CK 61's for close miking.
**C 460B comb-ULS/62**  
**STUDIO MICROPHONE**

Omnidirectional ULS Series microphone.  
Otherwise as C 460 B comb·ULS/61.  
All omnidirectional microphones provide a good sense of ambience which permits very natural sounding recordings. No proximity effect means no coloration (bass boost) at short working distances.

**C 460B comb-ULS/63**  
**STUDIO MICROPHONE**

Hypercardioid polar pattern, otherwise as C 460 B comb·ULS/61.  
Higher rejection of off-axis sounds due to the hypercardioid polar pattern results in higher acoustical separation, less spillover, and, consequently, better channel separation.

**C 460 B**  
**PREAMPLIFIER**

Same as C 460 B comb·ULS/61, except without CK 61 capsule. Also suited for CK 1, CK 3, CK 5, CK 8, and CK 22 in conjunction with A 60 adapter.

**CK 1X comb**  
**STUDIO MICROPHONE**

Complete microphone with capsule for use away from C 460 B preamplifier. Special cord supplied (see CK 1 X).

**PACKAGE**

- CK 1 X Capsule
- C 460 B Preamplifier
- MK 46/3 Capsule cord with H 48 Stand adapter
- W 32 Foam windscreen

**OPTIONAL ACCESSORIES**

- S 46 Table stand
- MK 46/4 Extension cord (specify length in m)
- W 32 Foam windscreen
- H 46 Spider suspension
- H 52 Stereo hanger
- N 62, N 66 AC power supplies
- B 18 Battery power supply
**CK 1X**  
**CARDIOID CAPSULE**

- Low-profile matte black capsule  
- Can be used away from the C 460 B preamplifier for visually unobtrusive placement.  
- A built-in miniature connector accepts the MK 46/3 cord connecting the CK 1 X to the C 460 B.  
- The 3 m (10-ft.) MK 46/3 may be extended to 60 m (180 ft.) max. (depending on surrounding field strength) with an MK 46/length-in-m extension cord.

**REQUIRED ACCESSORIES**
- C 460 B Microphone preamplifier  
- MK 46/3 Capsule cord  
- H 48 Stand adapter

**OPTIONAL ACCESSORIES**
- SI 46 Table stand  
- MK 46/ Extension cord (specify length in m)  
- H 32 Foam windshield  
- H 46 Spider suspension  
- H 52 Stereo hanger  
- N 63, N 65 AC power supplies  
- B 18 Battery power supply

**SPECIFICATIONS** (with C 460 B)
- Polar Pattern: cardioid  
- Frequency Range: 20 – 20,000 Hz  
- Sensitivity: 8 mV/Pa  
- Equivalent Noise Level: 24 dB (CCIR 468-2)  
  18 dB-A (DIN 45412-A)  
- S/N Ratio: 76 dB  
- Max. SPL for 0.5% THD: 140 dB  
- Size: 18 Ø x 40 mm (0.7 x 1.6 in.)  
- Net/Shipping Weight: 30/150 g (1.1/5.3 oz.)

**CK 2X**  
**OMNIDIRECTIONAL CAPSULE**

- Same as CK 1 X, except for omnidirectional polar pattern. Connection and accessories as CK 1 X.

**SPECIFICATIONS** (with C 460 B)
- Polar Pattern: omnidirectional  
- Frequency Range: 20 – 20,000 Hz  
- Sensitivity: 6 mV/Pa  
- Equivalent Noise Level: 26 dB (CCIR 468-2)  
  20 dB-A (DIN 45412-A)  
- S/N Ratio: 74 dB  
- Max. SPL for 0.5% THD: 140 dB  
- Size: 18 Ø x 40 mm (0.7 x 1.6 in.)  
- Net/Shipping Weight: 30/150 g (1.1/5.3 oz.)
Hypercardioid polar pattern for bass and midrange, increasing directivity for high frequencies. Connection and accessories as for CK 1 X.

ACCESSORIES
Same as for CK 1 X

SPECIFICATIONS (with C 460 B)

**Polar Pattern**: hypercardioid

**Frequency Range**: 30 – 20,000 Hz

**Sensitivity**: 10 mV/Pa

**Equivalent Noise Level**: 28 dB (CCIR 468-2)

**S/N Ratio**: 79 dB

**Max. SPL for 0.5% THD**: 137 dB

**Size**: 18.5 Ø x 207 mm (0.7 Ø x 8.1 in)

**Net/Shipping Weight**: 120/150 g (4.2/5.3 oz)
**CK 1**

**CARDOID CAPSULE**

Cardioid polar pattern.

For overhead, hi hat, snare drum, acoustic instruments such as guitar, piano, etc. Use a W 17 A wire mesh windscreen for protection from drumsticks.

**OPTIONAL ACCESSORIES**

W 32 Foam windscreen
W 17 A Wire mesh windscreen

**SPECIFICATIONS** (with C 451)

<table>
<thead>
<tr>
<th>Polar Pattern:</th>
<th>Cardioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>20 – 20,000 Hz</td>
</tr>
<tr>
<td>Sensitivity:</td>
<td>9.5 mV/Pa</td>
</tr>
<tr>
<td>Size:</td>
<td>18 Ø x 28 mm (0.7 Ø x 1.1 in)</td>
</tr>
<tr>
<td>Net/Shipping Weight:</td>
<td>20/60 g (0.7/2.1 oz.)</td>
</tr>
</tbody>
</table>

**CK 3**

**HYPERCARDIOID CAPSULE**

Hypercardioid polar pattern.

Same as CK 1, except for a narrower pickup angle for even better off-axis rejection which translates into excellent separation from neighboring instruments.

Often used to solve leakage problems, for instance between a hi-hat and snare drum. Also ideal where monitor speakers create a feedback problem when miking up quiet instruments such as an acoustic guitar.

**SPECIFICATIONS** (with C 451)

<table>
<thead>
<tr>
<th>Polar Pattern:</th>
<th>Cardioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>20 – 20,000 Hz</td>
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<tr>
<td>Sensitivity:</td>
<td>9.5 mV/Pa</td>
</tr>
<tr>
<td>Size:</td>
<td>18 Ø x 28 mm (0.7 Ø x 1.1 in)</td>
</tr>
<tr>
<td>Net/Shipping Weight:</td>
<td>20/60 g (0.7/2.1 oz.)</td>
</tr>
</tbody>
</table>
CK 5
VOCAL CAPSULE

Shock mount and integrated windscreen for on-stage vocal use. Same response as CK 1. Well suited for horns, too.

OPTIONAL ACCESSORIES
W 23 Foam windscreen

SPECIFICATIONS (with C 451)
Polar Pattern: cardioid
Frequency Range: 20 – 20,000 Hz
Sensitivity: 9.5 mV/Pa
Size: 49 Ø x 72 mm (1.9 Ø x 2.8 in.)
Net/Shipping Weight: 100/320 g (3.5/11.3 oz.)

CK 8
SHOTGUN CAPSULE

Short shotgun capsule combines pressure gradient and interference principles. Rejects rear and off-axis sounds.

Applications include far miking in TV or film studios, front-of-stage miking, etc. For acoustic guitar (less fingering noise), as well as overheads or far miking of guitar amps in pop productions.

STANDARD ACCESSORIES
W 18 Foam windscreen

SPECIFICATIONS (with C 451)
Polar Pattern: hypercardioid/directional
Frequency Range: 30 – 18,000 Hz
Sensitivity: 15 mV/Pa
Size: 18 Ø x 215 mm (0.7 Ø x 8.5 in.)
Net/Shipping Weight: 75/330 g (2.7/11.7 oz.)

Rycote "Zeppelin" windscreen, available through AKG.
CK 9
SHOTGUN CAPSULE

The CK 9 ensures maximum directivity for nearly complete rejection of sounds from the sides and rear. Its high directivity provides for working distances three times that of a conventional cardioid microphone. For general recording from greater distances.

STANDARD ACCESSORIES
W 19 Foam windscreen

SPECIFICATIONS (with C 451)
Polar Pattern: directional
Frequency Range: 30 - 18,000 Hz
Sensitivity: 11 mV/Pa
Size: 23 Ø x 610 mm (0.9 Ø x 24 in.)
Net/Shipping Weight: 480/950 g (1 1/2.1 lbs)

CK 22
OMNIDIRECTIONAL CAPSULE

Omnidirectional polar pattern ensures low susceptibility to wind, pop, and vibration noise.

For use with C 451 as a measurement microphone for analyzers. Like all omnis, ideal for A-B stereo: just hang two mics from the ceiling, a few meters apart, directly above the band or orchestra. This setup will reliably balance the instruments and give a good ambient feel.

OPTIONAL ACCESSORIES
W 32 Foam windscreen

SPECIFICATIONS (with C 451)
Polar Pattern: omnidirectional
Frequency Range: 20 - 20,000 Hz
Sensitivity: 8 mV/Pa
Size: 18 Ø x 34 mm (0.7 Ø x 1.3 in.)
Net/Shipping Weight: 4080 g (1.428 lbs)
Ultra Linear Series cardioid capsule for use with C460 B. Diaphragm diameter about 15 mm (0.6 in.). Same applications as for CK 1, especially suited for difficult sources thanks to excellent response.

**SPECIFICATIONS** (with C460 B)

<table>
<thead>
<tr>
<th>Polar Pattern</th>
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</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Sensitivity</td>
<td>8 mV/Pa</td>
</tr>
<tr>
<td>Size</td>
<td>21 Ø x 26.5 mm (0.8 Ø x 1 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>25/170 g (0.916 oz.)</td>
</tr>
</tbody>
</table>

Same as CK 61, except for omnidirectional polar pattern. For more reverberant sounding recordings.

Omnidirectional capsule with specially equalized frequency response. For far-field working outside the room radius, where most of the sound arriving at the microphone is reflected, diffuse sound.

Same as CK 61, except for hypercardioid polar pattern. Better off-axis rejection provides better channel separation and in many cases higher gain before feedback.

**CK 61-ULS**

**CARDIOID CAPSULE**

**CK 62-ULS**

**OMNIDIRECTIONAL CAPSULE**

**CK 62-DF**

**OMNIDIRECTIONAL CAPSULE**

**CK 63-ULS**

**HYPERCARDIOID CAPSULE**
C 522 ENG
STEREO REPORTERS' MICROPHONE

Two condenser cardioid capsules angled at 90° for XY stereo. Cable connector doubles as automatic on/off switch. Rechargeable battery/phantom powering. Battery charging either by commercial charger or from phantom power during operation. Battery operating time: 50 to 150 hrs. Rugged all-metal case. Battery check LED.

The C 522 ENG is a simple and professional tool for making excellent stereo features, interviews, music recordings, etc. Connects to all types of recorders (with balanced or unbalanced inputs). For handheld or stand mounted use.

STANDARD ACCESSORIES
SA 41/1 Stand adapter
H 32 Shock-mount stand adapter
W 52 Foam windscreen
MK 52/3 3-m (10-ft.) connecting cord with two 3-pin XLR connectors
MK 52/3 U 3-m (10-ft.) connecting cord with 3.5-mm stereo jack plug
Strong carrying case for microphone and accessories

SPECIFICATIONS
Polar Pattern: 2 x cardioid
Frequency Range: 20 - 20,000 Hz
Sensitivity: 10 mV/Pa
Max. Sensitivity Difference between Channels: 2 dB
Impedance: 200 ohms
Equivalent Noise Level: 20 dB (CCIR 468-2)
S/N Ratio: 74 dB
Max. SPL for 0.5% THD: 128 dB
Connector: 5-pin XLR
Size: 52/27 Ø x 215 mm (2/1.1 x 8.5 in.)
Net Shipping Weight: 300 g/11 oz (11 oz/2.2 lbs.)
C 535
VOCAL MICROPHONE

Rugged condenser vocal microphone, excellent response, particularly to high frequencies. Switchable 14 dB pre-attenuation pad and 500 Hz, 6 dB/ octave bass roll-off, and 100 Hz, 12 dB/octave bass cut-off. Matte black case.

Thus, the C 535 is ideal for singers who often change their working distance.

Its frequency response extending to 20 kHz, the C 535 will capture all the high frequency detail of a singer’s voice and place it slightly in front of the accompaniment. The proximity effect differs from that of dynamic mics such as the D 330 in that touching the mic with the lips causes less bass boost.

STANDARD ACCESSORIES
SA 41/1 Stand adapter

OPTIONAL ACCESSORIES
W 23 Foam windscreens
H 30 Shock-mount stand adapter
B 18 Battery power supply
N 62, N 66 AC power supplies
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

SPECIFICATIONS
Polar Pattern: cardioid
Frequency Range: 20 – 20,000 Hz
Sensitivity: 7 mV/Pa
Impedance: 200 ohms
Equivalent Noise Level: 30 dB (CCIR 468-2)
21 dB-A (DIN 45412-A)
S/N Ratio: 73 dB
Max. SPL for 0.5% THD: 132 dB
Size: 45/25 x 183 mm (1.8/1 x 7.2 in.)
Net/Shipping Weight: 300/780 g (1.1 oz./1.7 lbs.)

Being a condenser, the C 535 is also popular for studio recording and distant miking on stage; overhead, hi-hat, percussion and string instruments. In this case, the pad should be switched out for the necessary increase in sensitivity.
BOUNDARY LAYER MICROPHONE

Rugged, impact proof boundary layer microphone for placement on the floor or fixing to large surfaces (mounting holes provided). The transducer element is flush mounted in the center of the microphone. 3 m (10 ft.), steel wire reinforced connecting cord. Hemispherical polar pattern.

The C 562 BL provides natural sounding recordings with a good sense of depth. For optimum bass reproduction, it should be mounted on a large surface (floor, wall, piano lid, gobo). Boundary layer mics have proven their value in grand piano miking (fixed to the lid), ambient miking, e.g., for drums (wall mounted), and acoustic instrument miking (fixed to a large perspex plate in front of the instrument).

STANDARD ACCESSORIES
Dedicated stand adapter
W 62 Foam windscreen
Fixed 3 m (10 ft.) connecting cord

OPTIONAL ACCESSORIES
B 18 Battery power supply
N 62, N 66 AC power supplies
MK 9/10 Cable

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Polar Pattern</td>
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</tr>
<tr>
<td>Frequency Range</td>
<td>20 – 20,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>20 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>600 ohms</td>
</tr>
<tr>
<td>Equivalent Noise Level</td>
<td>28 dB (CCIR 468-2)</td>
</tr>
<tr>
<td></td>
<td>16 dB-A (DIN 45412-A)</td>
</tr>
<tr>
<td>S/N Ratio</td>
<td>78 dB</td>
</tr>
<tr>
<td>Max. SPL for 0.5% THD</td>
<td>130 dB</td>
</tr>
<tr>
<td>Size</td>
<td>160 Ø x 7 (9) mm (6.3 Ø x 0.3 (0.4) in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>950 g/2.9 kg (2.116 lbs.)</td>
</tr>
</tbody>
</table>

The C 562 BL sets up quickly and easily and is very inconspicuous – an asset in recording persons who are frightened by microphones. Two C 562’s are a good choice for A-B stereo location recording (concerts etc.).
Inconspicuous, matte black, omnidirectional miniature microphone. 3.5-m (11-ft. 8-in.) connecting cord. Lapel or buttonhole microphone for voice pickup. Its wide frequency range makes it a very good instrument microphone, too. May be installed inside a guitar sound hole; also suited for violin and zither. To mic up a grand piano, tape two C 567's to the lid, which may then be closed for higher gain-before-feedback.

**STANDARD ACCESSORIES**
- H 21 Universal clamp
- H 20 Tie pin
- W 37 Wire mesh windscreen
- H 16 Belt adapter

**OPTIONAL ACCESSORIES**
- B 18 Battery power supply
- N 62, N 66 AC power supplies
- MK 9/10 Cable

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tr>
<td>Polar Pattern</td>
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</tr>
<tr>
<td>Frequency Range</td>
<td>20 – 20,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>6 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>100 ohms</td>
</tr>
<tr>
<td>Equivalent Noise Level</td>
<td>34 dB (CCIR 468-2)</td>
</tr>
<tr>
<td></td>
<td>21 dB A (DIN 45412-A)</td>
</tr>
<tr>
<td>S/N Ratio</td>
<td>73 dB</td>
</tr>
<tr>
<td>Max. SPL for 0.5% THD</td>
<td>132 dB</td>
</tr>
<tr>
<td>Size</td>
<td>14 2/3 x 24 mm (0.5 2/3 x 1 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>100/200 g (3.5/7 oz.)</td>
</tr>
</tbody>
</table>

**CK 67/3**  
Same as C 567 E1, except with 3-m (10-ft.) unterminated cable. For wireless microphone transmitters or portable cassette recorders.

**CK 67/B9**  
Same as C 567 E1, except with B 9 battery power supply. No phantom power required, continuous volume control.

**CK 67WL**  
For wireless systems: CK 67 WL/1 connects to PT 42 Pocket Transmitter, CK 67 WL/2 to handheld transmitters via A 65 adapter.
C 568 EB
SHOTGUN MICROPHONE

Combined pressure gradient/interference microphone. Hypercardioid below about 500 Hz, continuously increasing directivity above 500 Hz. Switchable bass cut. Matte black all-metal case.

Shotgun microphones efficiently reject sounds from the sides. The C 568 EB is the microphone of choice for film, TV, video, lectern, or stage front distant miking.

STANDARD ACCESSORIES
SA 40 Stand adapter
W 68 Foam windscreen

OPTIONAL ACCESSORIES
H 30 Shock-mount/stand adapter
H 38 Small shock-mount
SA 38/H Small shock-mount/stand adapter
B 18 Battery power supply
N 62, N 66 AC power supplies

SPECIFICATIONS
Polar Pattern: hypercardioid/directional
Frequency Range: 20 – 20,000 Hz
Sensitivity: 11 mV/Pa
Impedance: 600 ohms
Equivalent Noise Level: 28 dB (CCIR 468-2)
18 dB-A (DIN 45412-A)
S/N Ratio: 76 dB
Max. SPL for 0.5% THD: 128 dB
Size: 21 Ø x 255 mm (0.8 x 10 in.)
Net/Shipping Weight: 175/650 g (6.2 oz./1.4 lbs.)
Pen sized condenser microphone. Specifically tuned acoustic tube in front of the transducer provides high sensitivity and unusually smooth low frequency response for a miniature directional microphone.

A dedicated set of accessories enables this small microphone to be set up easily and inconspicuously, without a stand. Very good results for snare drum, acoustic guitar, and saxophone, both on stage and in the studio. Excellent spot microphone thanks to high separation (hypercardiod).

STANDARD ACCESSORIES
W 70 Foam windsreen
MSH 70 Short gooseneck (140 mm/5.5 in.)
H 47 Stand adapter
SA 80 Universal clamp
SHZ 80 Screw link

OPTIONAL ACCESSORIES
MSH 80 Gooseneck (390 mm/15.3 in.)
N 62, N 66 AC power supplies
B 18 Battery power supply
MK 9/10 Cable

SPECIFICATIONS
Polar Pattern: hypercardiod

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>30 - 18,000 Hz</td>
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<tr>
<td>Sensitivity</td>
<td>10 mV/Pa</td>
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<tr>
<td>Impedance</td>
<td>400 ohms</td>
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<tr>
<td>Equivalent Noise Level</td>
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<td>21 dB-A (DIN 45412-A)</td>
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<tr>
<td>S/N Ratio</td>
<td>73 dB</td>
</tr>
<tr>
<td>Max. SPL for 0.5% THD</td>
<td>133 dB</td>
</tr>
<tr>
<td>Size</td>
<td>9 Ø x 135 mm (0.4 Ø x 5.3 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>35 g without connector and cord/750 g (1.2 oz/1.7 lbs.)</td>
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</table>
C 1000 S
VOCAL MICROPHONE

Rugged condenser vocal microphone, 9-V battery or phantom powered. On/off switch. Response similar to C 535.

The C 1000 S provides uncompromising studio quality even in battery operation as the 9-V battery, available everywhere, guarantees identical performance as on phantom power. Excellent vocal microphone, also suited for distant miking of choirs, acoustic instruments, etc. An ideal home recording microphone.

STANDARD ACCESSORIES
SA 43 Stand adapter

OPTIONAL ACCESSORIES
W 1000 Foam windscreen
MK 910 Cable
St 102 Boom stand
St 200 Floor stand

SPECIFICATIONS

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<tr>
<td>Frequency Range:</td>
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<td>Sensitivity:</td>
<td>6 mV/Pa</td>
</tr>
<tr>
<td>Impedance:</td>
<td>200 ohms</td>
</tr>
<tr>
<td>Max. SPL for 0.5% THD:</td>
<td>137 dB</td>
</tr>
<tr>
<td>Size:</td>
<td>34 Ø x 220 mm (1.3 Ø x 8.7 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight:</td>
<td>275/820 g (9.7 oz/1.8 lbs)</td>
</tr>
</tbody>
</table>
D 12
BASS MICROPHONE

A hand made large diaphragm transducer and a special "bass chamber" give the D 12 its unique bass response characterized by a peak around 100 Hz and pronounced proximity effect. The D 12 has a built-in windscreen.

The D 12 has been the standard microphone for bass drum, bass guitar, tuba, trombone, low pitched instruments in general. It is also often used for guitar, mainly for slightly distorted rock sounds.

In the studio, the D 12 has often turned out to be the optimum mic for quiet instruments from the acoustic guitar to the oboe, and for quiet voices, too.

STANDARD ACCESSORIES
SA 40 Stand adapter

OPTIONAL ACCESSORIES
MK 9/10 Cable
ST 102 Boom stand
ST 200 Floor stand

SPECIFICATIONS
Polar Pattern: cardioid
Frequency Range: 40 - 15,000 Hz
Sensitivity: 2.2 mV/Pa
Impedance: 290 ohms
Size: 55 x 76 x 140 mm (2.2 x 3 x 5.5 in)
Net/Shipping Weight: 580/870 g (1.3/1.9 lbs.)
CLOSE TALKING MICROPHONE

Small dynamic noise cancelling close talking microphone with high ambient noise rejection due to differential design.

OPTIONAL ACCESSORIES

W 32 Foam windscreen
MSH 32 Gooseneck
MSH 33 Gooseneck
MSH 52 Gooseneck
MSH 53 Gooseneck

SPECIFICATIONS

Polar Pattern: hypercardioid
Frequency Range: 70 – 10,000 Hz
Sensitivity: 0.72 mV/Pa
Impedance: 240 ohms
Size: 20 Ø x 42 mm (0.8 Ø x 1.7 in.)
Net/Shipping Weight: 40/150 g (1.4/5.3 oz.)
The D 70 ME offers the essential properties of any mic, ruggedness and sound quality, at an affordable price. The metal body is coated with matte black plastic. The D 70 ME features an integrated pop screen.

Like all vocal microphones, the D 70 ME may be used for percussion instruments, tom-toms, and horns, too.

**STANDARD ACCESSORIES**
SA 44 Stand adapter

**OPTIONAL ACCESSORIES**
W 31 Foam windsreen
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Measurement</th>
</tr>
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<tbody>
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<td>Cardioid</td>
</tr>
<tr>
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</tr>
<tr>
<td>Sensitivity</td>
<td>1.3 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>620 ohms</td>
</tr>
<tr>
<td>Size</td>
<td>35 Ø x 174 mm (1.3 Ø x 6.9 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>190/280 g (6.7/9.9 oz)</td>
</tr>
</tbody>
</table>

**D 70M**

Same as D 70 ME, except with fixed 3-m (10-ft.) cord with 1/4" jack plug. Without SA 44.

Also suited for percussion instruments, tom-toms, horns.

STANDARD ACCESSORIES
SA 26 Stand adapter
5-m (15-ft) cable with 1/4" jack plug

OPTIONAL ACCESSORIES
W 23 Foam windscren
St 200 Floor stand
St 1 Table stand

SPECIFICATIONS
| Polar Pattern: | cardioid |
| Frequency Range: | 60 – 16,000 Hz |
| Sensitivity: | 1.4 mV/Pa |
| Impedance: | 210 ohms |
| Size: | 54 Ø x 185 mm (2.1 Ø x 7.3 in.) |
| Net/Shipping Weight: | 210/500 g (7.4 oz./1.1 lb) |
D 90S
INSTRUMENT MICROPHONE

Rugged stage microphone with additional protective basket for the transducer element. Cardioid polar pattern. Lockable on/off switch. Chrome plated case.

Suited for horns, percussions, vocalists, choir.

STANDARD ACCESSORIES
SA 44 Stand adapter

OPTIONAL ACCESSORIES
W 23 Foam windscreens
W 31 Foam windscreens
MK 9/10 Cable
S1 200 Floor stand

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>cardioid</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>70 – 18,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.3 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>300 ohms</td>
</tr>
<tr>
<td>Size</td>
<td>45 ø x 190 mm (1.8 ø x 7.5 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>210/300 g (7.4/10.6 oz.)</td>
</tr>
</tbody>
</table>
Rugged vocal microphone with additional protective basket for the transducer element. On/off switch lockable in On position to prevent inadvertent switching off during performance. Matte black finish.

The D 95 S has a hypercardioid polar pattern for high gain-before-feedback. Besides vocals, uses include horns, percussions, tom-toms.

**STANDARD ACCESSORIES**
SA 44 Stand adapter

**OPTIONAL ACCESSORIES**
W 23 Foam windscreen
W 31 Foam windscreen
MK 9/10 Cable
St 200 Floor stand

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>hypercardioid</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>70 – 18,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.3 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>300 ohms</td>
</tr>
<tr>
<td>Size</td>
<td>45 ( \varnothing ) x 190 mm (1.8 ( \varnothing ) x 7.5 in)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>210/300 g (7.4/10.6 oz)</td>
</tr>
</tbody>
</table>
LAVALIER MICROPHONE

Small omnidirectional dynamic lavalier microphone. Sliding necklace clamp permits response peak between 2 and 8 kHz for better intelligibility. Complete with fixed 10-m (30-ft.) unbalanced cable.

The D 109 may be clipped on the lapel, worn around the neck, or, without the necklace clamp, used handheld for reporting.

STANDARD ACCESSORIES
Detachable necklace clamp with tie clip and necklace

OPTIONAL ACCESSORIES
NC 3 MC Male XLR connector

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
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</tr>
<tr>
<td>Frequency Range</td>
<td>50 - 15,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.1 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>240 ohms</td>
</tr>
<tr>
<td>Size</td>
<td>18 Ø x 73 mm (0.7 Ø x 2.9 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>170 g w/cord/500 g (6 oz./1.1 lbs.)</td>
</tr>
</tbody>
</table>
Changes in musicians’ and listeners’ tastes have been reflected by microphone designs. The D 112 has been developed as an optimized tool for creating modern bass drum and bass guitar sounds. This microphone’s assets include absolute freedom from distortion, a very low diaphragm resonance frequency, a relatively narrow-band presence rise at 4 kHz, and a strongly built case.

The D 112 gives a bass drum a lot of presence without much equalization. High energy low bass below 100 Hz provides power, the boosted mid and clean high frequencies above 10 kHz keep the bass drum and bass guitar clearly distinguishable within the mix. A built-in windscreens enables the D 112 to be used for low pitched horns such as the trombone and tuba as well.

STANDARD ACCESSORIES
SA 40 Stand adapter

OPTIONAL ACCESSORIES
MK 9/10 Cable
St 102 Boom stand

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
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</tr>
<tr>
<td>Frequency Range</td>
<td>20 – 17,000 Hz</td>
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<tr>
<td>Sensitivity</td>
<td>1.8 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>210 ohms</td>
</tr>
<tr>
<td>Size</td>
<td>150 x 70 x 115 mm (4.5 x 2.9 x 5.9 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>280/970 g (9.9 oz./2.2 lbs)</td>
</tr>
</tbody>
</table>

In short, the AKG bass microphones offer two sound alternatives: D 12 – round, momentous; D 112 – punchy, contemporary.
The 0125 has been specifically created for on stage instrument miking. Strong die cast case with sturdy wire mesh front grille. Satin nickel plated shock-mounted transducer and hum compensation coil.

The flat mid and high frequency response (not commonly found in dynamic mics) translates into uncolored sound. The roll-off below 250 Hz compensates for proximity effect (bass boost at close working distance) and provides well-defined bass when used close-up. Optimized for miking up congas and similar percussion instruments, toms, and guitar amps, the D 125 is frequently used for horns, too. The required windscreen is built in.

**STANDARD ACCESSORIES**
- SA 40 Stand adapter

**OPTIONAL ACCESSORIES**
- W 31 Foam windscreen
- MK 9/10 Cable
- St 102 Boom stand
- St 200 Floor stand

**SPECIFICATIONS**
- Polar Pattern: Cardoid
- Frequency Range: 60 - 15,000 Hz
- Sensitivity: 1.9 mV/Pa
- Impedance: 210 ohms
- Size: 43 Ø x 178 mm (1.7 Ø x 7 in.)
- Net/Shipping Weight: 225/540 g (7.8 oz./1.2 lbs.)

The D 125 can be used very close to extremely loud instruments (trumpet) without problems.
Omnidirectional polar pattern, picks up sounds equally from all sides. Exceptionally rugged.

Omnidirectional mics are often used for reporting and similar tasks.
Their advantages include insensitivity to pop and handling noise, absence of proximity effect.

STANDARD ACCESSORIES
SA 40 Stand adapter

OPTIONAL ACCESSORIES
W 31 Foam windscreen
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

SPECIFICATIONS
<table>
<thead>
<tr>
<th>Polar Pattern:</th>
<th>omnidirectional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>50 – 14,000 Hz</td>
</tr>
<tr>
<td>Sensitivity:</td>
<td>1.7 mV/Pa</td>
</tr>
<tr>
<td>Impedance:</td>
<td>220 ohms</td>
</tr>
<tr>
<td>Size:</td>
<td>43 Ø x 173 mm (1.7 Ø x 6.8 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight:</td>
<td>140/580 g (4.9 oz / 1.3 lbs)</td>
</tr>
</tbody>
</table>
D 190
INSTRUMENT MICROPHONE

One of the hottest selling microphones ever. Very impartial sound. Characteristic sintered cap acts as windscreen.

The D 190 first made its mark as a reporters' microphone. Many musicians like it for tom-toms and congas. By virtue of its smooth response the D 190 may be a cost-efficient alternative to condenser microphones as it gives excellent results in live recording, for instance.

STANDARD ACCESSORIES
SA 40 Stand adapter

OPTIONAL ACCESSORIES
W 31 Foam windscreen
H 10 Stereo bar
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

SPECIFICATIONS
Polar Pattern: cardioid
Frequency Range: 30 – 16,000 Hz
Sensitivity: 1.6 mV/Pa
Impedance: 280 ohms
Size: 40 Ø x 161 mm (1.6 Ø x 6.3 in.)
Net/Shipping Weight: 180/500 g (6.3 oz / 1.1 lbs.)

D 190S
Same as D 190, except with on/off switch.
The D 202 uses the exclusive AKG Two-Way Technology: the bass (20 – 500 Hz) and treble (500 – 20,000 Hz) ranges are picked up by separate transducers; the result being a wide, flat frequency response. 3 step bass cut (0, -7, -20 dB at 50 Hz), black plastic case.

The most notable quality of AKG Two-Way microphones is that they have nearly no proximity effect. Thus, the bass range will remain unaffected as the working distance changes, the sound will not become "boomy" or "thinner". Often required for speech pickup, interviews, etc., this feature is also an advantage for horn players on stage who often change their working distance for dynamic reasons.

Having no proximity effect, the D 202, D 222, and D 224 Two-Way microphones are not recommended as vocal microphones.

STANDARD ACCESSORIES
SA 16 Stand adapter

OPTIONAL ACCESSORIES
W 9 A + W 29 rear and front windscreens
H 10 Stereo bar
H 30 Shock mount stand adapter
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand
St 1, St 5, St 305 Table stands

SPECIFICATIONS
Polar Pattern: cardioid
Frequency Range: 20 – 20,000 Hz
Sensitivity: 1.6 mV/Pa
Impedance: 300 ohms
Size: 52 Ø x 218 mm (2.1 Ø x 8.6 in.)
Net/Shipping Weight: 320/800 g (11.3 oz./1.8 lbs.)
Similar to the D 202, the D 222 has a different crossover frequency (400 Hz), and its transducers are connected out of phase. Switchable 0, -6, -12 dB bass cut at 50 Hz.

Like the D 202, the D 222 excellently suits the grand piano (bass range) and horns as well as being a viable alternative to condenser microphones for strings.

**STANDARD ACCESSORIES**

SA 41/1 Stand adapter

**OPTIONAL ACCESSORIES**

W 29 + W 29 A Foam wind screens
H 12 Stereo bar
H 30 Shock-mount stand adapter
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

**SPECIFICATIONS**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Polar Pattern:</strong></td>
<td>cardioid</td>
</tr>
<tr>
<td><strong>Frequency Range:</strong></td>
<td>20 – 18,000 Hz</td>
</tr>
<tr>
<td><strong>Sensitivity:</strong></td>
<td>1.5 mV/Pa</td>
</tr>
<tr>
<td><strong>Impedance:</strong></td>
<td>320 ohms</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>45 Ø x 205 mm (1.8 x 8.1 in.)</td>
</tr>
<tr>
<td><strong>Net/Shipping Weight:</strong></td>
<td>250/750 g (8.8 oz./11.7 lbs.)</td>
</tr>
</tbody>
</table>
The most expensive dynamic microphone from AKG—and justifiably so! The D 224, a Two-Way design (bass transducer 20 – 500 Hz, treble transducer 500 – 20,000 Hz) equals the performance of condenser microphones: wide, flat frequency response, excellent transient response, nearly no proximity effect. Switchable bass cut (0, –7, –12 dB), nickel plated case.

The D 224 has established itself as an alternative to condenser microphones for miking sound sources rich in overtones, such as cymbals (overhead), hi-hat, Leslie tweeters.

Ideally suited for the grand piano (treble range) and loud sources that overload condensers (dynamic microphones are virtually impossible to overload).

STANDARD ACCESSORIES
SA 40 Stand adapter
W 2 Front windscreen
W 2 A Rear windscreen

OPTIONAL ACCESSORIES
W 22 Wire mesh windscreen, e.g., for protection from drumsticks
SA 18/38 All-metal stand adapter
H 30 Shock-mount stand adapter
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

SPECIFICATIONS
Polar Pattern: cardiod
Frequency Range: 20 – 20,000 Hz
Sensitivity: 1.3 mV/Pa
Impedance: 260 ohms
Size: 23 Ø x 195 mm (0.9 Ø x 7.7 in.)
Net/Shipping Weight: 280/700 g (9.9 oz./1.6 lbs.)
The wire mesh cap of the D 310—the critical part of any vocal microphone—consists of two layers: the heavy-duty wire mesh and beneath it an additional protective basket. This, in conjunction with the indestructible die-cast case, ensures the exceptional ruggedness of the AKG D 310, D 321, and D 330 microphones. The D 310 case is nickel plated.

**STANDARD ACCESSORIES**
SA 41/1 Stand adapter

**OPTIONAL ACCESSORIES**
W 23 Foam windscrewn
W 31 Foam windscrewn
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>Cardioid</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>60 – 18,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.3 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>270 ohms</td>
</tr>
<tr>
<td>Size</td>
<td>45 Ø x 190 mm (1.8 Ø x 7.3 in)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>240/700 g (8.5 oz/11.6 lbs)</td>
</tr>
</tbody>
</table>

**D 310NR**
Same as D 310, except in anti-glare, dark gray finish.

**D 310S**
Same as D 310, except with on/off switch lockable in On position.
The D 321 transducer design utilizes a completely new principle and improves handling noise rejection by 20 dB. The hypercardioid polar pattern is notably true so that off-axis sounds will be much lower in level, yet unchanged in sound. This means that leakage from other instruments will be uncolored. Dark gray finish.

The D 321 is the sonic alternative to the D 330, less crisp, smarter, with a smaller treble rise. A popular sound for vocals and very popular for horns.

And finally, the D 321 can be counted on to solve all handling, footfall noise, and similar problems.

STANDARD ACCESSORIES
SA 4111 Stand adapter

OPTIONAL ACCESSORIES
W 23 Foam windscreens
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

SPECIFICATIONS
Polar Pattern: hypercardiod
Frequency Range: 40 – 20,000 Hz
Sensitivity: 1.4 mV/Pa
Impedance: 300 ohms
Size: 48 Ø x 186 mm (1.9 Ø x 7.3 in.)
Net/Shipping Weight: 330/850 g (11.7 oz./1.9 lbs.)
**D 330**

**VOCAL MICROPHONE**

The top-of-the-line AKG vocal microphone. Extremely rugged due to strong wire mesh cap with internal reinforcement structure, die-cast case. Plug-in transducer element. Switchable bass cut (0, –15, –25 dB at 100 Hz) and presence boost (0, +2, +4 dB at 4 kHz).

The response of the D 330 has been specifically tailored to the frontman’s requirements. Hypercardioid polar pattern for high gain-before feedback. A mid frequency rise gives a crisp sound that easily cuts through the mix. Recommended for feedback-prone situations. Also suited for flute, harmonica, acoustic guitar, etc.

**STANDARD ACCESSORIES**

SA 41/1 Stand adapter

**OPTIONAL ACCESSORIES**

W 23 Foam windscreen
MK 9110 Cable
St 102 Boom stand
St 200 Floor stand

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
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</tr>
<tr>
<td>Frequency Range</td>
<td>50 – 20,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.2 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>370 ohms</td>
</tr>
<tr>
<td>Size</td>
<td>53 Ø x 185 mm (2.1 Ø x 7.5 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>310/800 g (11 oz./1.8 lbs.)</td>
</tr>
</tbody>
</table>

**D 330 NR**

Same as D 330, except for dark gray finish that prevents the glaring light reflections otherwise a problem in video work.
Proven, rugged, cardioid instrument mic. Built-in pop screen, 3 step bass control (0, −14, −16 dB at 50 Hz), nickel plated case.

Introduced as a vocal mic, the D 1200 has become more and more popular with horn players, and is a reliable standard mic for wind instruments today. Often used for the snare drum, too.

**STANDARD ACCESSORIES**
SA 41/1 Stand adapter

**OPTIONAL ACCESSORIES**
W 29 Foam windscreen
MK 9/10 Cable
St 102 Boom stand
St 200 Floor stand

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
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<tr>
<td>Frequency Range</td>
<td>25 - 17,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>2.3 mV/Pa</td>
</tr>
<tr>
<td>Impedance</td>
<td>220 ohms</td>
</tr>
<tr>
<td>Size</td>
<td>37 3/4&quot; x 152 mm (1.5 3/4&quot; x 6 in.)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>275/600 g (9.7 oz / 1.3 lbs)</td>
</tr>
</tbody>
</table>
**D 541 E**

**GOOSENECK MICROPHONE**

Gooseneck microphone with XLR connector for mixing console talkback input.

**SPECIFICATIONS**

- **Polar Pattern**: cardioid
- **Frequency Range**: 140 - 17,000 Hz
- **Sensitivity**: 2.3 mV/Pa
- **Length**: 360 mm (14.2 in.) incl. of goose neck
- **Net/Shipping Weight**: 240/370 g (8.5/13 oz.)

**D 541**

D 541 E version for permanent installation.

**D 590**

**GOOSENECK MICROPHONE**

Design based on D 190, cardioid pattern, exceptionally insensitive to vibration noise.

**D 900 E**

**SHOTGUN MICROPHONE**

The D 900 E is a professional dynamic shotgun microphone. Its high directivity allows for working distances three to four times that of a conventional cardioid for the same amount of ambient noise rejection.

- Incorporated, switchable 0, -7, -20 dB bass cut at 50 Hz.
- A perfect tool for location recording, film, video, TV, etc.

**STANDARD ACCESSORIES**

SA 16/1 Stand adapter
W 3A, W 19 Foam windscreens

**D 558**

**GOOSENECK MICROPHONE**

Noise cancelling hypercardioid microphone for use in noisy environments.

**D 510**

**GOOSENECK MICROPHONE**

Omnidirectional gooseneck microphone.

**OPTIONAL ACCESSORIES**

- H 7 Rubber handle
- H 70 Shock mount
- SA 70/19 All-metal stand adapter
- MK 910 Cable
- SI 102 Boom stand
- SI 200 Floor stand

**SPECIFICATIONS**

- **Polar Pattern**: directional
- **Frequency Range**: 60 - 12,000 Hz
- **Sensitivity**: 3 mV/Pa
- **Impedance**: 240 ohms
- **Size**: 24 Ø x 660 mm (0.9 x 26 in.)
- **Net/Shipping Weight**: 485 g/1.5 kg (17.1 oz./3.3 lbs.)
INTERCOM HEADSETS
Q 34

HEADSET

"Classical" circumaural headset for general intercom use.

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th>Earphones</th>
<th>Microphone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>100 - 5,000 Hz</td>
<td>100 - 8,000 Hz</td>
</tr>
<tr>
<td>Impedance:</td>
<td>200 ohms</td>
<td>230 ohms</td>
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<tr>
<td>Sensitivity:</td>
<td>90 dB</td>
<td>0.7 mV/Pa</td>
</tr>
<tr>
<td>Weight:</td>
<td></td>
<td>230 g (8.1 oz)</td>
</tr>
</tbody>
</table>

Q 35

Single-earphone version of Q 34.

Q 24/10

Headphones combined with a condenser microphone.
Lightweight, comfortable headset for intercom use.

Q 24/20

Same as Q 24/10, except with dynamic microphone.

Q 15/10

Featherweight headset (45 g/1.6 oz.)
Single earphone, condenser microphone.

Q 15/20

Same as Q 15/10, except with dynamic microphone.

For more information on AKG communication, intercom, and paging products, see our "Audio Communications" catalog.
For absolute freedom of movement unhampered by any cable, AKG offers the WMS wireless system for microphones and instruments. The distinguishing feature of the WMS is its versatility. Being modular, it can be optimally adjusted to any application. An ideal choice for sound companies, theaters, and all those who need to cover different uses (condenser, dynamic mics, lavalier, instrument pickup) with the same transmitter.

DIVERSITY

For professional applications where maximum reliability is required, diversity receivers are recommended. These use two antennas and receiver sections to avoid dropouts caused by interference at one antenna by automatically switching in the other one with the stronger signal.
AKG wireless microphones are available as complete systems (see below) or separate components.

### System 42
- **Frequency**: 26 – 45 MHz
- **Components**:
  - 1 PT 42.10-10 Pocket transmitter
  - 1 SR 42.10 Receiver
  - 1 TA 40-2 Transmitter antenna
  - 1 CK 67 WL1 Lapel microphone
  - 1 BC 40 Belt clip
  - 1 Carrying case

### System 42 Diversity
- **Frequency**: 26 – 45 MHz
- **Components**:
  - 1 PT 42.10-10 Pocket transmitter
  - 1 SR 42.11 Receiver
  - 1 TA 40-2 Transmitter antenna
  - 1 CK 67 WL1 Lapel microphone
  - 2 RA 185-200 Receiver antennas
  - 1 Power cord
  - 1 Carrying case

For instrument transmission (e.g., guitar), specify MK 40/J cable instead of CK 67 WL1.

### System 85
- **Frequency**: 26 – 45 MHz
- **Components**:
  - 1 D 330 WL or D 321 WL Microphone element (specify)
  - 1 SR 85.10 Receiver
  - 1 TA 85-1 Transmitter antenna
  - 1 MK 85/E Adapter cord
  - 1 BC 85 Belt clip/necklace clamp
  - 1 RA·12 Receiver antenna
  - 1 Power cord
  - 1 Carrying case

### System 85 Diversity
- **Frequency**: 26 – 45 MHz
- **Components**:
  - 1 D 330 WL or D 321 WL Microphone element (specify)
  - 1 SR 85.11 Receiver
  - 1 TA 85-1 Transmitter antenna
  - 1 MK 85/E Adapter cord
  - 1 BC 85 Belt clip/necklace clamp
  - 2 RA 185-200 Receiver antennas
  - 1 Power cord
  - 1 Carrying case

For instrument transmission (e.g., guitar), specify MK 85J instead of microphone element and TA 85-2 transmitter antenna instead of TA 85-1.

### System 185W
- **Frequency**: 130 – 190 MHz
- **Components**:
  - 1 D 330 WL or D 321 WL Microphone element (specify)
  - 1 SR 185.10W Receiver
  - 1 TA 185-1 Transmitter antenna
  - 1 MK 85/E Adapter cord
  - 1 BC 85 Belt clip/necklace clamp
  - 1 Power cord
  - 1 Carrying case

### System 185W Diversity
- **Frequency**: 130 – 190 MHz
- **Components**:
  - 1 D 330 WL or D 321 WL Microphone element (specify)
  - 1 SR 185.11W Receiver
  - 1 TA 185-1 Transmitter antenna
  - 1 MK 85/E Adapter cord
  - 2 RA 185-200 Receiver antennas
  - 1 Power cord
  - 1 Carrying case

For instrument transmission (e.g., guitar), specify MK 85 J instead of microphone element and TA 185-2 transmitter antenna instead of TA 85-1.

**185 N**: Narrow band version of System 185. 130 – 240 MHz.
Specify carrier frequency when ordering.

### Allocated Frequencies
Carrier frequencies allocated to wireless microphone systems may differ from country to country. Be sure to check allocated frequencies as well as the relevant rules and regulations in force in your country and obtain the required permission(s) for operation (if applicable).

The AKG WMS allows you to set up as many as 12 wireless channels (depending on relevant regulations). For further details and specifications, order your free copy of the special WMS Catalog.
Same response as hardware D 321. Up-to-date, “impartial” sound. Dynamic transducer, pronounced proximity effect. For vocalists touching the mic with their lips.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Polar Pattern</th>
<th>Hypercardioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>40 – 20,000 Hz</td>
</tr>
</tbody>
</table>

Same response as the famous D 330. Crisp sound. Dynamic transducer, pronounced proximity effect for lip contact singing.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Polar Pattern</th>
<th>Hypercardioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>40 – 20,000 Hz</td>
</tr>
</tbody>
</table>

Condenser transducer. Very good high frequency response. Less proximity effect than dynamic elements. Ideal for long or changing working distances, highly recommended for choirs. Switchable bass cut and 20-dB preattenuation pad, therefore suited to loud rock singers as well as for distant miking.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Polar Pattern</th>
<th>Cardioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
<td>20 – 20,000 Hz</td>
</tr>
</tbody>
</table>

Note: The C 410 headset and C 567 E 1 miniature microphones are also available as wireless versions. See pages 17 and 35.
LN compander circuit for wide dynamic range. Battery check and overload LEDs. Sensitivity adjustable in four steps from 30 to 700 mV.

The small PT 42 is an inconspicuous transmitter for voice transmission in conjunction with the CK 67 WU1 lapel microphone. Also ideal for transmitting instruments such as guitars, bass guitars, or portable (non-MIDI) synthesizers. Transmitter for C 410 WU1 wireless headset microphone for drummers, keyboardists, etc.

**OPTIONAL ACCESSORIES**
- CK 67 WU1 Lapel microphone
- BC 40 Belt clip
- BC 40 G Guitar clamp
- TA 40-2 Wire antenna
- MK 40/U Cable w/1/4" jack plug
- MK 40/E XLR cable

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>between 32 and 45 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Output</td>
<td>10 mW</td>
</tr>
<tr>
<td>Audio Frequency Range</td>
<td>40 - 16,000 Hz</td>
</tr>
<tr>
<td>Operating Time</td>
<td>approx. 15 hrs (9-V alkaline battery)</td>
</tr>
<tr>
<td>Size</td>
<td>65 x 60 x 25 mm (2.6 x 2.4 x 1 in)</td>
</tr>
<tr>
<td>Weight</td>
<td>100 g (3.5 oz.) incl. of battery</td>
</tr>
</tbody>
</table>

**PT 42.10-20, PT 42.10-30**

Same as PT 42.10, except for 25 and 30 mW output power, respectively.
90 dB dynamic range thanks to LN compander; input sensitivity adjustable over 46-dB range; three selectable carrier frequencies; switchable limiter for absolute overload protection; on/off battery check LED; battery charging socket.

Three different microphone elements are available for handheld use.

**OPTIONAL ACCESSORIES**

- D 321 WL, D 330 WL, C 335 WL Microphone elements
- A 85 Adapter
- MK 85/J and MK 85/E Adapter cords
- TA 85 -2 Wire antenna for bodypack mode

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequencies</td>
<td>Three, selectable between 26 and 45 MHz; max. channel spacing between channels 1 and 3: 1.5 MHz</td>
</tr>
<tr>
<td>RF Output</td>
<td>10 mW</td>
</tr>
<tr>
<td>Audio Frequency Range</td>
<td>40 – 20,000 Hz</td>
</tr>
<tr>
<td>Operating Time</td>
<td>approx. 10 hrs (9-V alkaline battery)</td>
</tr>
<tr>
<td>Size</td>
<td>37 Ø x 215 mm (1.5 Ø x 8.5 in)</td>
</tr>
<tr>
<td>Weight</td>
<td>370 g (13 oz) incl. of microphone element and battery</td>
</tr>
</tbody>
</table>

**T 85.30-10**

HANDHELD TRANSMITTER

The A 85 adapter enables instruments or other microphones to be connected to the T 85 which is then used as a bodypack transmitter. The T 85 can be operated together with the SR 42 and SR 85 receivers.

**OPTIONAL ACCESSORIES**

- 0321 WL, 0330 WL, C 535 WL Microphone elements
- A 85 Adapter
- MK 85/J and MK 85/E Adapter cords
- TA 85 -2 Wire antenna for bodypack mode

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequencies</td>
<td>Three, selectable between 26 and 45 MHz; max. channel spacing between channels 1 and 3: 1.5 MHz</td>
</tr>
<tr>
<td>RF Output</td>
<td>10 mW</td>
</tr>
<tr>
<td>Audio Frequency Range</td>
<td>40 – 20,000 Hz</td>
</tr>
<tr>
<td>Operating Time</td>
<td>approx. 10 hrs (9-V alkaline battery)</td>
</tr>
<tr>
<td>Size</td>
<td>37 Ø x 215 mm (1.5 Ø x 8.5 in)</td>
</tr>
<tr>
<td>Weight</td>
<td>370 g (13 oz) incl. of microphone element and battery</td>
</tr>
</tbody>
</table>

**T 85.10-10**

Same as T 85.30-10, except with one carrier frequency only.

**T 85.10-20, T 85.30-20**

Same as T 85.10-10 and T 85.30-10, except for 25 mW rf output. Special version with 100 mW rf output (for radio station use) available on request.
**SR 42.31**


The SR 42.31 is a professional, cost efficient solution. Diversity provides highly reliable reception. The channel selector switch enables you to switch to another channel in case of interference in one channel.

**OPTIONAL ACCESSORIES**

RA 85-120 + RAS 85 Magnetic base antenna kit
MK 850/10 or MK 850/25 10-m (30-ft) or 25-m (75-ft) antenna cables for RA 85 -120
RA 85-12 Screw-on telescopic antenna
Diversity operation: Two antennas (at least one of them with magnetic base) required.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Frequencies:</th>
<th>Three, selectable between 26 and 45 MHz, max. spacing between channels 1 and 3. 1.5 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Frequency Range:</td>
<td>40 - 16,000 Hz</td>
</tr>
<tr>
<td>SN Ratio at 1 mV antenna voltage:</td>
<td>&gt;92 dB</td>
</tr>
</tbody>
</table>

**SR 42.30**

Same as SR 42.31, except non-diversity. Built-in telescopic antenna. External antenna socket.

**SR 42.11**

Same as SR 42.31, except for one frequency only.

**SR 42.10**

Same as SR 42.31, except non-diversity, one frequency. Built-in telescopic antenna. External antenna socket.
Integrated LN compander, adjustable squelch suppresses self-noise while transmitter is switched off, headphones output, AC and battery operation; adjustable audio output; diversity; three selectable frequencies; LED indicators for rf reception, audio level, battery voltage, and diversity. In conjunction with the T 85 handheld or PT 42 bodypack transmitter, the SR 85.31 ensures excellent performance.

The diversity version uses two antennas, with the one supplying the better signal being switched in at any time. Therefore, reflections causing dropouts at one antenna location will not degrade reception. The channel selector switch enables you to switch to another channel in case of interference in one channel.

**OPTIONAL ACCESSORIES**

- RA 85·120 + RAS 85 Magnetic base antenna kit
- MK 850/10 or MK 850/25 10-m (30-ft.) or 25-m (75-ft.) antenna cable for RA 85·120

Diversity operation: Two antennas required

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Frequencies</th>
<th>Three, selectable between 26 and 45 MHz, max. spacing between channels 1 and 3: 2 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Frequency Range</td>
<td>40 – 20,000 Hz</td>
</tr>
<tr>
<td>S/N Ratio at 1 mV antenna voltage</td>
<td>&gt;90 dB (compander in)</td>
</tr>
</tbody>
</table>

**SR 85.30**

Same as SR 85.31, except non-diversity.

**SR 85.11**

Same as SR 85.31, except for one frequency only.

**SR 85.10**

Same as SR 85.31, except non-diversity, one frequency.
LN compander provides 90 dB dynamic range, input sensitivity adjustable over 46 dB range. Switchable limiter for absolute overload protection. On/off/battery check LED. Battery charging socket.

While being identical with the T 85, the T 185 operates in the 200-MHz range for even better interference rejection. Three microphone elements are available for handheld use. The A 85 adapter enables instruments and other microphones to be connected with the T 185 then being used as a bodypack transmitter.

**OPTIONAL ACCESSORIES**
D 321 WL, D 330 WL, C 535 WL Microphone elements
A 85 Adapter
MK 85/J Adapter cord with 1/4" jack plug
TA 185-2 Wire antenna for bodypack operation

**SPECIFICATIONS**
- **Frequency:** between 130 and 190 MHz
- **RF Output:** 25 mW
- **Audio Frequency Range:** 40 – 20,000 Hz
- **Operating Time:** approx. 10 hrs (9-V alkaline battery)
- **Size:** 37 Ø x 215 mm (1.5 x 8.5 in.)
- **Weight:** 370 g (13 oz.) incl. of microphone element and battery

**T 185.10N**
Narrowband version for setting up multichannel systems. One frequency between 130 and 240 MHz; 35 mW 1f power output, audio frequency response: 40 – 15,000 Hz.
Integrated LN compander. Adjustable squelch suppresses self-noise while transmitter is switched off. Headphones output. AC and battery operation. Adjustable audio output. Diversity LED indicators for rf reception, audio level, battery voltage, and diversity.

Same features as SR 85. Operation in the 200-MHz range provides inherent better interference rejection.

Diversity reception uses two antennas, with the one supplying the better signal being switched in at any time. Therefore, reflections causing dropouts at one antenna location will not degrade reception.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Frequency:</th>
<th>between 130 and 190 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Frequency Range:</td>
<td>40 - 20,000 Hz</td>
</tr>
<tr>
<td>SN Ratio at 1 mV antenna voltage:</td>
<td>&gt;90 dB (compander in)</td>
</tr>
</tbody>
</table>

**STANDARD ACCESSORIES**

- Power cord

**OPTIONAL ACCESSORIES**

- RA 185-200 Receiver antenna
- MK 850/10 or MK 850/25 10-m (30-ft.) or 25-m (75-ft.) antenna cables for RA 185-120
- RA 185-1 Screw-on rod antenna (Diversity operation: Two antennas required, at least one with magnetic base)

**SR 185.10W**

Same as SR 185.11, except non-diversity. Complete with RA 185.1.

**SR 185.10N (SR 185.11N)**

Narrowband versions for setting up multichannel systems. One frequency between 130 and 240 MHz, audio frequency response: 40 - 15,000 Hz.
**K 109S HEADPHONES**

Based on professional ear defenders, the K 109 provide maximum isolation from ambient noise. Ideal for drummers: the sound off tape will always be loud enough compared to the drums.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Frequency Range:</th>
<th>50 – 10,000 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance:</td>
<td>100 ohms</td>
</tr>
<tr>
<td>Sensitivity:</td>
<td>92 dB</td>
</tr>
<tr>
<td>Weight:</td>
<td>320 g (11.4 oz) without cord</td>
</tr>
</tbody>
</table>

**K 141 MONITOR HEADPHONES**

This semi-open air design has been used by many studios for monitoring. Like all AKG headphones, complete with 1/4" jack plug.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Frequency Range:</th>
<th>20 – 20,000 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance:</td>
<td>600 ohms</td>
</tr>
<tr>
<td>Sensitivity:</td>
<td>98 dB</td>
</tr>
<tr>
<td>Weight:</td>
<td>225 g (8 oz.) without cord</td>
</tr>
</tbody>
</table>
K 240 MONITOR
HEADPHONES

Semi-open-air headphones with full range diaphragms. Neutral sound, ideal for home studio remixing.

SPECIFICATIONS
Frequency Range: 15 – 20,000 Hz
Impedance: 600 ohms
Sensitivity: 88 dB
Weight: 225 g (8 oz.) without cord

K 240DF
STUDIO MONITOR
HEADPHONES

The K 240 DF are acoustically diffuse field equalized according to the relevant tentative standard by the West German IRT (Institute for Broadcast Technology). Each pair of K 240 DF is hand selected in order to ensure minimum tolerances.

SPECIFICATIONS
Frequency Range: 20 – 20,000 Hz
Impedance: 600 ohms
Sensitivity: 88 dB
Weight: 240 g (8.5 oz.) without cord
### K 270 PLAYBACK

**HEADPHONES**

Isolating headphones. Ideal for vocal overdubs. Two identical transducers in each earcup provide the required sound level.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>20 - 20,000 Hz</td>
</tr>
<tr>
<td>Impedance</td>
<td>75 ohms</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>93 dB</td>
</tr>
<tr>
<td>Weight</td>
<td>270 g (9.5 oz.) without cord</td>
</tr>
</tbody>
</table>

### K 280 PARABOLIC

**HEADPHONES**

Open-air headphones using two identical transducers in each earphone for high listening levels and superb transient response.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>20 - 20,000 Hz</td>
</tr>
<tr>
<td>Impedance</td>
<td>75 ohms</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>94 dB</td>
</tr>
<tr>
<td>Weight</td>
<td>250 g (8.8 oz.) without cord</td>
</tr>
</tbody>
</table>

The "Pro Fidelity" catalog contains all AKG headphones and phono cartridges.
EFFECTS UNITS
The rapid evolution of digital reverb has brought about a price/performance standard inconceivable just a few years back. The inevitable fly in the ointment is that if you buy a digital reverb today you know that its successor will be better and cheaper.

The ADR 68K is different. It is entirely software based in that its operating system, display, and controls are integrated in the software.

**CONTROLS**

The soft-labeled switches and slide controls below the large display can be configured for unlimited future possibilities.

**REMOTE CONTROL**

All functions are available on the remote control. 6.5-m (22-ft.) connecting cable supplied (longer cables available on request).

**FUTURE**

The ADR 68K can be improved and expanded by exchanging the software, in other words, a few ICs. A team of software engineers are permanently working on sound updates, new effects, user suggestions for modifications, etc. Three software packages have been supplied already, Version 4.0 will be for sale from February, 1988.

**MIDI**

In, Out, and Thru sockets provided.

**PROGRAMS**

More than 100 factory presets can be chosen from and modified by the user. MIDI parameter assignments are stored together with the user programs.

**REVERB**

The reverb presets feature the following basic adjustable parameters:

- Reverb Time (up to infinity, i.e., continuous reverb build-up, no decay)
- LF Decay
- HF Decay
- HF Bandwidth (overall bandwidth)
- Simulated Hall Size in percent
- Reverb Predelay up to 500 msecs
- Depth (apparent distance of listener from sound source)
- Diffusion (concentration of echoes at beginning of reverb)
- Density (concentration of echoes at end of reverb)
- Gate Parameters (trigger level in dB, delay of stopped reverb onset in msecs, gate slope, HF and LF decay with a less "hard" gate)
- Early Reflections (for left and right sides, with one page of controls per side)
- Mixer Pages (for internal balancing of left and right early reflections, and of reverb levels when reverberating sampled sounds)
SAMPLING

The sampling programs are available in the effects bank and currently provide 8 secs of sampled sound at 15 kHz, with the processor running at 32 kHz sampling rate. It is possible to break those 8 secs up into four sections of 2 secs each, and trigger them independently or simultaneously. Samples may be triggered via a gate which may be set for the audio inputs, via the four 1/4" trigger jacks on the remote, or via MIDI. It is possible to edit both the start and stop points of a sample, as well as to "loop" the sample for repeated playback. Trigger delay is virtually nonexistent with the ADR, due to the high speed of the 68000 microprocessor. Sampled sounds can be reverberated within the ADR 68K. 4 secs of sampled sound would be available for this application, and could be broken up into two 2-sec samples. Via the SPLIT program mode it would be possible to reverberate these two sampled sounds in different acoustic spaces as well.

PROGRAM STORAGE

The ADR 68K has two storage banks, one resident in the machine at all times, the other on an interchangeable data cartridge, for 50 user programs each.

HELP FUNCTION

Pressing the HELP key will give the user information about the various parameters currently displayed. This will in many cases negate the necessity of reading the owner’s manual.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>15 kHz</td>
</tr>
<tr>
<td>Sampling Rate</td>
<td>32 kHz</td>
</tr>
<tr>
<td>Noise/PCM Conversion</td>
<td>16 bit for 86 + dB dynamic range, utilizes dither for improved low level performance</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>15 kHz, +0/+2 dB in direct delay mode</td>
</tr>
<tr>
<td>Filters</td>
<td>11th order filters at input and output</td>
</tr>
<tr>
<td>Internal Audio Memory</td>
<td>256 k words by 16 bits available to programs for audio delay (8 seconds of sound)</td>
</tr>
<tr>
<td>Size</td>
<td>rack mount, 2 units high, 19&quot; (48 cm) wide, 3.5&quot; (8.9 cm) high, and 12&quot; (33 cm) deep, excluding XLR connector protrusion</td>
</tr>
<tr>
<td>Weight</td>
<td>fully boxed for shipment, approx. 18 lbs.</td>
</tr>
<tr>
<td>Inputs</td>
<td>two, stereo, electronically balanced (differential amplifier), Pin 2 high, Pin 3 low, and Pin 1 is ground. Input impedance of pin 3 is 11 kohms and pin 2 is 21 kohms</td>
</tr>
<tr>
<td>Outputs</td>
<td>four, two stereo pairs, active differential circuit; Pin 2 is high, Pin 3 is low, and Pin 1 is ground. Maximum output level is +17 dBV nominal. Connectors are XLR-3 female</td>
</tr>
<tr>
<td>Power</td>
<td>115 or 230 VAC nominal voltage (selectable via internal switch). Supplies maintain regulation down to approx. 95 VAC (182 VAC). Consult with factory about special version with transformer for 100/200 VAC supply. Unit operates with 60 or 50 Hz power line frequency. Power consumption approx. 90 watts. Detachable IEC standard power cord</td>
</tr>
<tr>
<td>Fuses</td>
<td>three internal fuses, two for the mains (US type 3 AG, SLO BLO .75 A), and one for the +5 VDC supply (US type 8 AG, 8 A). All supplies are current and power limited</td>
</tr>
<tr>
<td>Environment</td>
<td>operating range is 10 - 50 degrees C, operating, while the storage environment range is 0 - 70 degrees C. Relative humidity may be up to 95% non-condensing</td>
</tr>
</tbody>
</table>

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BX 25ED
ANALOG REVERBERATOR

For years, AKG has been making spring reverberators based on its proprietary "Torsional Transmission Line". Interestingly, even in this day and age of cheaper and much more versatile digital reverberators, there is still a market for AKG analog reverbs. The reason seems to be the perceived warm quality of the reverb sound. In addition to the analog spring reverb section, the BX 25 ED contains a digital delay section providing echoes and predelay for room simulation.

USES
Reverberation time (RT60) being adjustable from 1.5 to 3.5 seconds and predelay being provided, the BX 25 ED allows all traditional reverb programs to be set up.

The BX 25 ED is used primarily for classical music and vocal recording. Where several reverberators are available the BX 25 ED is mainly used for creating a warm sound, e.g., for a distorted electric guitar.

STEREO
Each channel of the BX 25 ED can be adjusted and used separately. Crosstalk rejection is 80 dB. The two channels may be switched to one common input (mono drive).

OPERATION
The inputs are overload protected by a limiter (threshold 6 dB above selected nominal level). The following delay section enables two echoes (individual reflections) to be set in 6 msec steps up to 60 msecs; the echo levels can be attenuated by up to 20 dB. The echoes are available both on separate outputs and mixed in with the reverb.

A common predelay for both channels is adjustable to 30, 60, 90, or 120 msecs. The reverb signal EQ provides ±10 dB at 150 Hz for bass and ±5 dB at 5 kHz for treble.

REMOTE CONTROL
The supplied remote control enables the RT60 for each channel and the reverb/reverb + echoes mix to be adjusted.
SPECIFICATIONS

Decay Time: 1.5 to 3.5 secs. continuously adjustable
Nominal Input Level: -22, -6, 0, +6, +12 dBm, selectable
Max. Input Level: 35 dB above selected nominal level
Limiter Range: approx. 30 dB
Input Impedance: ≥10 kohms/channel, transformer balanced
Nominal Output Level: -6, +6, +12 dBm, selectable
Max. Output Level: 20 dB above nominal level
Output Impedance:
- ≥300 ohms (+12 dBm)
- ≥100 ohms (+6 dBm) transformer balanced
- ≤15 ohms (-6 dBm)
Frequency Range: 50 - 18,000 Hz
SIN Ratio: 76 dB rms (DIN 45405)
Crosstalk Rejection: 60 dB
Operating Temperature: -10° C to +60° C
Power: 115/230 VAC, 50 - 60 Hz
Max. Inclination for Reliable Operation: 10° (20 %)
Size: 45 x 52 x 54 cm (18 x 20 x 21 in.) WxDxH
Net/Shipping Weight: approx. 30/41 kg (66/90 lbs.)

BX 25E

Same as BX 25 ED, except without M 250 digital delay section. For pure reverb without predelay.
The TDU 8000 is a state-of-the-art delay from AKG. The extremely wide dynamic range and full 20 kHz bandwidth ensure absolute fidelity. Application areas are critical sound systems (e.g., opera houses) and no-compromise studio operation.

OPERATION

Three front panel switches select or program delay time, program number, and output assignment. The input level is indicated by a bi-color LED.

USES

Delays are used to compensate for delay time differences between main and spot microphones as well as between separate loudspeaker clusters; ADT and other voice doubling techniques; pseudo stereo; reverb predelay; or to correct the "feel" of individual tracks. By virtue of its extremely wide dynamic range, the TDU 8000 is highly recommended for classical music and nearly noise-free recording techniques (e.g., digital, Dolby Spectral Recording).

PROGRAMS

Ten user presets can be stored. A special program prevents them from being accidentally erased. This is necessary, for instance, in high quality sound systems where delay times have been determined by complex measurements.

DYNAMIC RANGE

The 110 dB dynamic range of the TDU 8000 clearly surpasses the dynamic window available in the studio, which is mainly determined by the acoustic noise floor, mixer self-noise, and maximum sound levels. In other words, the TDU 8000 remains inaudible. Therefore, the TDU 8000 is the delay of choice for noise-free digital recordings or absolutely unobtrusive sound reinforcement (opera houses, theaters).

STEREO OPERATION

The TDU 8000 is available with one or two inputs. In the two-channel mode, maximum delay time is 650 msecs.

UP TO EIGHT OUTPUTS

The TDU 8000 is available with two to eight outputs (specify).

R 800 REMOTE CONTROL

The R 800 contains program and delay time controls as well as a display which also indicates the input level in 6 dB steps. This permits precise adjustments from any point in a hall.

The remote control connecting cable is 20 m (60 ft.) long (longer cables to be ordered separately).

OPTIONS (SPECIFY WHEN ORDERING)

- Transformer balanced inputs and outputs
- "Failsafe" relays that connect inputs to assigned outputs in case of power failure
- R 800 remote control
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency Response:</strong></td>
<td>20 – 19,500 Hz±0.8 dB</td>
</tr>
<tr>
<td><strong>Word Length:</strong></td>
<td>19 bits (16-bit mantissa + 3-bit exponent)</td>
</tr>
<tr>
<td><strong>Clock Frequency:</strong></td>
<td>50 kHz</td>
</tr>
<tr>
<td><strong>Dynamic Range:</strong></td>
<td>≥110 dB (A weighted)</td>
</tr>
<tr>
<td><strong>Noise and Distortion:</strong></td>
<td>≤0.025% at 1 kHz and +18 dBm, ≤0.05% (20 – 20,000 Hz)</td>
</tr>
<tr>
<td><strong>S/N Ratio re +20 dBm:</strong></td>
<td>≥100 dB (CCIR 468-2), ≥110 dB (A-weighted)</td>
</tr>
<tr>
<td><strong>Delay Times:</strong></td>
<td>0.1 to 999.9 msecs in 0.1-msec steps, 1000 to 1310 msecs in 1-msec steps</td>
</tr>
<tr>
<td><strong>Delay Time Storage:</strong></td>
<td>non-volatile memory (EEPROMs)</td>
</tr>
<tr>
<td><strong>Inputs:</strong></td>
<td>one or two (one per input card)</td>
</tr>
<tr>
<td><strong>Input Impedance:</strong></td>
<td>≥10 kohms, electronically balanced</td>
</tr>
<tr>
<td><strong>Input Level:</strong></td>
<td>+20 dBm max. (7.75 V rms)</td>
</tr>
<tr>
<td><strong>Input Level LED:</strong></td>
<td>green: –22 to +14 dBm, red: +14 to +20 dBm</td>
</tr>
<tr>
<td><strong>Outputs:</strong></td>
<td>two to eight (two per output card)</td>
</tr>
<tr>
<td><strong>Output Impedance:</strong></td>
<td>≥50 ohms, single ended</td>
</tr>
<tr>
<td><strong>Output Level:</strong></td>
<td>+20 dBm max. (7.75 V rms)</td>
</tr>
<tr>
<td><strong>Load Impedance:</strong></td>
<td>≥600 ohms</td>
</tr>
<tr>
<td><strong>Power:</strong></td>
<td>90-135 V (110 VAC setting), 180-270 V (220 VAC setting)</td>
</tr>
<tr>
<td><strong>Power Consumption:</strong></td>
<td>80 VA max.</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>483 x 89 x 410 mm (19 x 3.5 x 16.2 in)</td>
</tr>
<tr>
<td><strong>Net Weight:</strong></td>
<td>6.8 kg (15 lbs.)</td>
</tr>
</tbody>
</table>
MONITOR LOUDSPEAKER
LSM 50

Infinite baffle mini monitor with 135-mm (5 1/4") full range driver. 50 W power rating, XLR socket.

The LSM 50 is used in studios to simulate the average consumer's equipment (small radios, TV sets). Reference speakers of this type are called upon to deliver strictly "impartial" sound.

OPTIONAL ACCESSORIES
St 50 Mounting bracket for shelf or microphone floor stand
St 60 Wall mounting bracket vertically and horizontally adjustable

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>130 – 18,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>87 dB/1 W/1 m</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 ohms</td>
</tr>
<tr>
<td>Power Rating</td>
<td>50 W</td>
</tr>
<tr>
<td>Size</td>
<td>170 x 170 x 142 mm (6.7 x 6.7 x 1.7 in)</td>
</tr>
<tr>
<td>Net/Shipping Weight</td>
<td>2/2.2 kg (4.4/4.9 lbs)</td>
</tr>
</tbody>
</table>
PHANTOM POWER SUPPLIES FOR CONDENSER MICROPHONES

N 62 E
AC power supply for two AKG condenser microphones. May be internally soldered for 110 or 220 VAC.

SPECIFICATIONS
Output Voltage: 48 V DC
Size: 210 x 80 x 170 mm (8.3 x 3.1 x 6.7 in.)
Net/Shipping Weight: 1.95/2.35 kg (4.3/5.2 lbs.)

N 66 E
AC power supply for one to six condenser microphones or three stereo condenser microphones. May be internally soldered for 110 or 220 VAC.

SPECIFICATIONS
Output Voltage: 48 V DC
Size: 290 x 115 x 170 mm (11.4 x 4.5 x 6.7 in.)
Net/Shipping Weight: 3.25/3.65 kg (7.2/8 lbs.)

B 9
Battery power supply for C 401, C 402, C 408, C 409, and C 410/B condenser microphones. Requires the IEC 6F22 9-V battery.

SPECIFICATIONS
Output Voltage: 9 V DC
Size: 134 x 51 x 27 mm (5.3 x 2 x 1.1 in.)
Net/Shipping Weight: 70 (without battery)/120 g (2.5/4.2 oz.)

B 18
Battery power supply. Requires two IEC 6F22 9-V batteries. Connects to all types of inputs (mixer, preamp, tape recorder, etc.).

SPECIFICATIONS
Output Voltage: 18 V DC
Size: 80 (60) x 100 x 40 mm (3.2/2.4 x 3.9 x 1.6 in.)
Net/Shipping Weight: 130 (without battery)/180 g (4.6/6.3 oz.)

A 48 V
The A 48 V enables newer B 18 units to be adapted to 48-Volt operation.
VR 61 30-cm (12-in.) matte black extension tube with integrated pivoting swivel joint.

VR 62 90-cm (36-in.) matte black extension tube with integrated pivoting swivel joint.

CMS ACCESSORIES

A 50/10 -10 dB attenuation pad for recording high-SPL sources.

A 50/20 20 dB attenuation pad.

A 51 180° swivel joint for C 451 preamps and capsules.

A 52 Phantom powering module for C 451 E and C 451 EB. Current regulated to about 3 mA.

A 60 Thread adapter for screwing CK 1, CK 3, CK 5, CK 8, and CK 22 capsules on C 460 B preamp.

A 52/60 130-cm (52-in.) matte black angled extension tube with swivel joint, otherwise same as VR 1.

VR 2 30-cm (12-in.) matte black angled extension tube for C 451 (CK 1, CK 22, CK 3, CK 5, CK 8).

VR 1 30-cm (12-in.) matte black angled extension tube with swivel joint, otherwise same as VR 1.

ULS ACCESSORIES

VR 61 30-cm (12-in.) matte black extension tube with integrated pivoting swivel joint.

VR 62 90-cm (36-in.) matte black extension tube with integrated pivoting swivel joint.

A 61 Detented 180° swivel joint.
WMS ACCESSORIES

TRANSMITTER ANTENNAS
TA 85-1, TA 185-1 rod antennas for T 85 and T 185 handheld transmitters.
TA 85-2, TA 185-2 wire antennas for T 85 and T 185 handheld transmitters.

Note: When using a handheld transmitter in the bodypack mode connect a wire antenna to avoid attenuating the antenna radiation.
TA 40-2 wire antenna for PT 42 body-pack transmitter.

RECEIVER ANTENNAS
RA 85-12 screw-on telescopic antenna for SR 85.
RA 185-1 screw-on antenna for SR 185.
RAS 85 and RA 85-120 magnetic base and antenna for SR 42 and SR 85 receivers.
RA 185-200 wideband receiver antenna for SR 185.

A 85 Adapter
The A 85 adapter enables instruments, dynamic and condenser microphones to be connected to the T 85 and T 185 handheld transmitters.

ANTENNA CABLES
MK 850/10 10-m (30-ft.), MK 850/25 25-m (75-ft.) antenna cables for magnetic base antennas.
Specify frequency when ordering antennas.

INSTRUMENT CORDS
MK 40/J jack cord for connecting a guitar, bass, etc. to the PT 42 bodypack transmitter.
MK 85/J jack cord connecting to T 85 and T 185 handheld transmitters via A 85 adapter.
MK 40/E XLR cord for PT 42.
MK 85/E XLR cord for T 85/ T 185 + A 85.

ATTACHMENT CLIPS
BC 40 belt clip for PT 42
BC 40 G guitar strap clip
BC 85 belt clip/necklace clamp that allows the T 85 and T 185 handheld transmitters to be worn around the neck (by MCs, etc.) or fixed to the belt.

RACK SYSTEM
Various hardware kits for mounting one or more receivers in a 19" rack are available.
Also available: antenna splitters enabling one antenna (or two, in diversity operation) to feed several receivers.
WINDSCREENS

W 9A
Rear windscreed for D 202 F 1 and D 900.
Net weight: 5 g (0.2 oz.), shipping weight: 30 g (1.1 oz.).

W 17A
Foam lined wire mesh windscreed for CMS microphones, internal diameter 20 mm (0.8 in)
Net weight: 45 g (1.6 oz.), shipping weight: 70 g (2.5 oz.).

W 22
Foam lined wire mesh windscreed for D 224, internal diameter: 23 mm (0.9 in)
Net weight: 90 g (3.2 oz.), shipping weight: 120 g (4.2 oz.).

W 23
Foam windscreed for ball head microphones approx. 50 mm (2 in)
in diameter.
Net weight: 5 g (0.2 oz.), shipping weight: 30 g (1.1 oz.).

W 29
Foam windscreed for D 202 F 1
Net weight: 5 g (0.2 oz.), shipping weight: 30 g (1.1 oz.).

W 31
Foam windscreed for ball head microphones approx. 40 mm (1.6 in) in diameter (D 90 S, D 95 S, D 125, D 130, D 190, D 310, D 590).
Net weight: 10 g (0.4 oz.), shipping weight: 30 g (1.1 oz.).

W 32
Foam windscreed for microphones approx. 18 to 20 mm (0.7 to 0.8 in) in diameter (CK 1, CK 3, CK 22, CK 61 - ULS, CK 62 - ULS, D 58, D 510 B, D 508 B).
Net weight: 5 g (0.2 oz.), shipping weight: 27 g (0.9 oz.).

W 46
Snap-on wire mesh windscreed with special lining, internal diameter: 21 mm (0.8 in).
For C 460 B-ULS microphones.
Net weight: 60 g (2.1 oz.), shipping weight: 98 g (3.1 oz.).

PF 20
Stocking type pop screen, ideal for vocal recording; very efficient as a pop screen, keeps working distance constant.
Net weight: 150 g (5.3 oz.), shipping weight: 240 g (8.5 oz.).
STAND ADAPTERS

SA 18/1 B
All-metal swivel stand adapter with locking screw, matte black finish; clamp diameter: approx. 18 mm (0.7 in.), for C 451 E and C 451 EB.
Net weight: 140 g (5 oz.), shipping weight: 160 g (5.7 oz.)

SA 18/2 B
Same as SA 18/1 B, for 21 mm (0.8 in.) shafts.
Net weight: 140 g (5 oz.), shipping weight: 160 g (5.7 oz.)

SA 18/3 B
Same as SA 18/1 B, for 23 mm (0.9 in.) shafts.
Net weight: 140 g (5 oz.), shipping weight: 160 g (5.7 oz.)

SA 26
Plastic clothespin swivel adapter. Clamp width: 19 to 32 mm (0.7 to 1.3 in.), accepts conical microphones.
Net weight: 50 g (1.7 oz.), shipping weight: 50 g (1.7 oz.)

SA 38/H
Shock-mount stand adapter especially suited for C 566 EB or C 460 B ULS.
Net weight: 140 g (5 oz.), shipping weight: 215 g (7.5 oz.)

SA 40
Swivel stand adapter with flexible clamp 19 to 27 mm (0.7 to 1.1 in.) in diameter.
Net weight: 80 g (2.8 oz.), shipping weight: 120 g (4.2 oz.)

SA 41/1
Same as SA 40, accepts conical microphones 23 to 28 mm (0.9 to 1.1 in.) in diameter.
Net weight: 80 g (2.8 oz.), shipping weight: 120 g (4.2 oz.)

SA 43
Same as SA 40, accepts conical microphones 30 to 37 mm (1.2 to 1.5 in.) in diameter.
For C 1000 S and wireless handheld transmitters.
Net weight: 57 g (2 oz.), shipping weight: 97 g (3.4 oz.)

SA 70/3
All-metal stand adapter with locking screw, for use with H 70 or H 7 pistol grip for CK 9 microphones.
Net weight: 260 g (9.2 oz.), shipping weight: 350 g (12.4 oz.)

SA 70/9
Same as SA 70/3, for D 900 shotgun microphone.
Net weight: 260 g (9.2 oz.), shipping weight: 350 g (12.4 oz.)
SUSPENSIONS AND SUPPORTS

H 7  Rubber handle for use with SA 70/3 or SA 70/9 for CK 9 or D 900 shotgun microphones. Net weight: 230 g (8.1 oz.), shipping weight: 280 g (9.9 oz.)

H 9  Hanger for CMS microphones (C 451 + capsules) and H 10. Net weight: 45 g (1.6 oz.), shipping weight: 70 g (2.5 oz.)

H 10  Metal stereo bar with two 3/8” knurled head screws. Screw distance adjustable from 35 to 78 mm (1.4 to 3 in.). Especially recommended for CMS microphones. Net weight: 240 g (8.5 oz.), shipping weight: 300 g (10.6 oz.)

H 17A  Elastic suspension/windscreen for C 414 B-ULS and C 414 B-TL studio condenser microphones. Mounts on fishpole. Net weight: 400 g (14.1 oz.), shipping weight: 500 g (17.7 oz.)

H 30  Shock-mount stand adapter for all microphones 15 to 33 mm (0.6 to 1.3 in) in diameter. Net weight: 55 g (1.9 oz.), shipping weight: 100 g (3.5 oz.)

H 46  Dedicated spider suspension for CK X capsules. Prevents low frequency noise from being transmitted to the capsule by the stand or boom. Low weight makes fishpole operation less strenuous. Net weight: 65 g (2.3 oz.), shipping weight: 88 g (3.1 oz.)

H 52  Stereo Suspension for simple, inconspicuous stereo operation of CK 1 X or CK 3 X capsules. Permits coincident and near-coincident (ORTF) mixing. Lightweight, easily adjustable and low profile. the H 52 can be hung from the ceiling or stand mounted. Net weight: 85 g (3 oz.), shipping weight: 132 g (4.6 oz.)

H 70  Boom suspension shock mount for use with SA 70/3 or SA 70/9 and CK 9 and D 900 microphones. Net weight: 180 g (6.4 oz.) shipping weight: 188 g (6.8 oz.)
**TABLE STANDS**

**St 1**
Miniature tripod with folding legs. Height: 8 cm (3.1 in.), tripod radius: approx. 15 cm (5.9 in.). For universal use.
Net weight: 120 g (4.2 oz.), shipping weight: 120 g (4.2 oz.)

**St 5**
General purpose table stand. Can be fitted with up to 18 illuminated push-buttons.
Size: 125x150x50 mm (4.9x5.9x2 in.)
Net weight: 370 g (13 oz.), shipping weight: 450 g (15.8 oz.)

**St 12**
General purpose, telescopic stand adjustable from 35 to 55 cm (13.8 to 21.7 in.), with massive cast iron base 18 cm (7 in.) in diameter.
Net weight: 2350 g (52 lbs.), shipping weight: 2350 g (52 lbs.)

**St 46**
Miniature table stand for small and light microphones or microphone capsules. Base diameter: 74 mm (2.9 in.)
Net weight: 315 g (11.1 oz.), shipping weight: 350 g (12.4 oz.)

**St 200**
Telescopic stand adjustable from 110 to 180 cm (3 ft. 8 in. to 6 ft.), folding legs (tripod radius: 30 cm/1 ft.), incorporated shock absorbers.
Net weight: 3550 g (7.8 lbs.), shipping weight: 4200 g (9.3 lbs.)

**St 102A**
Telescopic studio boom stand adjustable from 90 to 165 cm (3 to 5 1/2 ft.), 70 cm (2 ft. 4 in.) boom, screw-on legs (tripod radius: 37 cm/14.6 in.).
Net weight: 4900 g (10.9 lbs.), shipping weight: 5550 g (12.3 lbs.)

**St 305**
Heavy-duty, anti-shock table stand with circular base 16 cm (6.3 in.) in diameter. Recommended for use with VR 2 or VR 62.
Net weight: 2350 g (5.2 lbs.), shipping weight: 2600 g (5.7 lbs.)

**FLOOR STANDS**

**St 305**
Heavy-duty, anti-shock table stand with circular base 16 cm (6.3 in.) in diameter. Recommended for use with VR 2 or VR 62.
Net weight: 2350 g (5.2 lbs.), shipping weight: 2600 g (5.7 lbs.)
GOOSENECKS

MSH 32
Length: 300 mm (1 ft.), shaft diameter: 15 mm (0.6 in.). For all microphones with 3-pin XLR connector. High-gloss nickel finish, 3/8" thread at stand end, without cable.

MSH 33
Same as MSH 32, except with 3-pin XLR connector at installation end to connect to mixers, etc.

MSH 52
Same as MSH 32, except 500 mm (1 ft. 8 in.) long.

MSH 53
Same as MSH 33, except 500 mm (1 ft. 8 in.) long.

All stand adapters and mounting hardware are delivered with both 3/8" and 5/8" thread inserts. The SA 50 stand adapter provides a convenient leadout for cables run inside a stand mounted gooseneck.

MICROPHONE CABLES

MK 4/5
5 m (16 ft.) long, with NC 3 FC 3-pin female XLR connector, other end unterminated.

MK 9/10
10 m (33 ft.) long, with NC 3 FC female and NC 3 MC male XLR connectors. Net weight: 380 g (13.4 oz.), shipping weight: 380 g (13.4 oz.)
**CONNECTORS**

- **NC 3 FC**
  - 3-pin female XLR connector.
  - Net weight: 35 g (1.2 oz.), shipping weight: 35 g (1.2 oz.).

- **NC 3 MC**
  - 3-pin male XLR connector.
  - Net weight: 45 g (1.6 oz.), shipping weight: 45 g (1.6 oz.).

- **A 12**
  - Adapter plug for connecting cables with 3-pin DIN connectors to XLR connectors (microphones).

- **NC 3 FP**
  - 3-socket female XLR wall mount connector.
  - Net weight: 36 g (1.3 oz.), shipping weight: 36 g (1.3 oz.).

- **NC 3 MP**
  - 3-pin male XLR wall mount connector.
  - Net weight: 20 g (0.7 oz.), shipping weight: 20 g (0.7 oz.).
MICROPHONES IN THEORY AND PRACTICE
CONDENSER MICROPHONE

The transducer element consists of a vibrating diaphragm (foil) only about a ten thousandth of an inch thick and a fixed metal plate (back electrode). These two electrodes make up a condenser (capacitor) charged by an externally applied voltage (polarization voltage) or carrying its own permanent charge. The sound waves driving the diaphragm will vary the capacitance of the condenser and consequently the microphone output voltage will vary in step with the sound waves.

Condenser microphones, also called capacitor microphones, need an impedance converter (preamplifier) to match the very high impedance condenser capsule to low-Z inputs. Condenser microphones usually have a flat frequency response, high sensitivity, and good transient response. They require a power supply.

CONNECTING AKG MICROPHONES

All microphones listed in this catalog are low impedance (about 200 ohms), incorporating a balanced output on a 3-pin male XLR connector. Pin 1 is ground, pin 2 high, pin 3 low. The output is compatible with all mixers, tape recorders, etc.

To connect an AKG microphone to an input jack, wire the microphone cable as follows: connect the sleeve of the jack plug (ground) to the cable shield and the shield to pins 1 and 3 on the XLR connector. The center ("hot") wire connects pin 2 to the jack plug tip (see diagram).

If your installation wiring uses pin 3 as "high" or "hot," bridge pins 1 and 2 for unbalanced connections and make sure to follow the same convention for all cables, or you'll get phase reversal problems.

Condenser microphones usually have a flat frequency response, high sensitivity, and good transient response. They require a power supply.

CONNECTING CONDENSER MICROPHONES

Condenser microphones require a supply voltage. Except for battery-operated mics such as the C 522 ENG, C 1000 S, etc., this voltage needs to be fed through the microphone cable (phantom powering). This can be done in several ways.

1. From a mixer with built-in phantom power (9 to 52 V)

2. Modifying the mixer or tape recorder to provide phantom power. Find a regulated DC voltage between 9 and 52 V and wire the input(s) as shown. All modern AKG condenser microphones accept any voltage within this range.

Current consumption of the phantom circuit is negligible (about 1 mA per mic). Only the C 451 will draw up to 10 mA, so use the A 52 phantom powering module which provides current regulation to 3 mA. Replace the input jacks with XLR sockets if possible. While stereo jacks will work as well, there may be a risk of mistaking them for send/returns or the like.
Use the following standard resistances for Rv:

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 V (±2 V)</td>
<td>680 ohms</td>
</tr>
<tr>
<td>24 V (±4 V)</td>
<td>1k2 ohms</td>
</tr>
<tr>
<td>48 V (±4 V)</td>
<td>6k8 ohms</td>
</tr>
<tr>
<td>0.5% tolerance !</td>
<td></td>
</tr>
</tbody>
</table>

3. Insert N 62, N 66 AC power supplies between mixer and microphones.
4. Use the B 18 battery power supply ideal for outdoor recording.

**DYNAMIC MICROPHONE**

A coil attached to a diaphragm is driven by the sound waves and vibrates between the poles of a magnet. This movement induces in the coil a voltage which corresponds to the sound pressure.

Dynamic microphones handle high sound pressures without overloading and are very rugged. Also known as moving-coil microphone.

**DISTORTION**

Dynamic microphones virtually never distort the signal. To be precise, their distortions at very high sound pressures (>130 dB) cannot be measured because loudspeakers are incapable of reproducing such levels distortion free. For this reason, we have stated no maximum SPL for dynamic microphones. Condenser mics, though, may overload at high sound levels.

When close miking (a few inches) loud instruments such as drums or trumpets the microphone's sensitivity should be reduced. Use the preattenuation switch on the C 414 and C 535 or the A 50 screw-in pad for CMS microphones.

**ENVIRONMENT**

Dynamic microphones will generally stand up to extreme environmental conditions such as temperatures from −25°C to +70°C and high humidity.

Condenser microphones, however, are susceptible to humidity and condensation. When an object is damp and colder than its environment, dew (condensation water) will form on its surface. Dew inside the transducer or high-impedance preamp section will cause crackling noises.

Storing condenser microphones:
1. Store the microphone in a dry and warm place. It should never be colder than its environment. If it has been transported in a cold car or truck, allow it to warm up before use.
2. The supplied silica gel absorbs humidity. It will maintain this property when you keep it in the closed package. It may be regenerated in the oven if necessary.
3. Be sure to protect condenser mics from rain when using them outdoors.

**EQUIVALENT NOISE LEVEL**

Condenser microphones hiss. The amount of sound from a loudspeaker is called equivalent noise level. An equivalent noise level of 20 dB SPL means the microphone's self-noise is 'as loud as if the mic were recording a sound of 20 dB SPL (~= 20 dB above the threshold of hearing), a very low value, corresponding to the noise floor of a studio with very good sound insulation and no air conditioning noise.

A low equivalent noise level means low self-noise.

There are several standards. This catalog states the values according to CCIR 468-2 (identical with those to DIN 45459 and DIN 45415, the latter being lower as they are A-weighted (corresponding to the old IEC-119 standard).

**FEEDBACK**

When a microphone picks up amplified sound from a loudspeaker it will be reamplified, picked up again, etc., until the commonly known shrill howling (some- times a lower midrange rumbling) sets in.

In small (rehearsal) rooms, feedback is usually caused by reflections. In this case, acoustic treatment of the walls should help.

On stages with correctly set up house speakers it is the monitor speakers that may cause feedback. Very good hypercardioid microphones may sometimes provide a few extra dB's of gain-before-feedback. Place the monitors slightly to the sides of the mic axis (135°) where the mic is least sensitive.
FREQUENCY RESPONSE

Microphones are not equally sensitive to all notes. The frequency response indicates the relationship between sensitivity and pitch. The 0-dB reference being the output voltage at 1000 Hz, the frequency response is measured at constant sound pressure level, from about 20 Hz (lowest note) to 20,000 Hz (above the threshold of human hearing).

The frequency response curve of the D 125, for instance, rolls off from 250 Hz attenuating the bass range (percussive sound). In the mid and treble ranges the response curve is rather flat (neutral sounding). A response curve "peak" shows that this range is emphasized.

HOME RECORDING

On stage, everything is miked up close in order to avoid feedback. In the studio, however, distant miking predominates. The preferred working distance for acoustic instruments and vocals is about half a meter (20 in.) because this is the best way to achieve a natural sound. At such distances, condenser microphones are ideal because of their excellent response.

Try to use the same studio miking techniques at home. If you plan to use your stage mics, the C 535 and C 1000 S will be good investments. Rugged stage vocal microphones, these condensers are sensitive enough for optimum distant miking.

HUM SENSITIVITY

Magnetic fields from amplifiers, long power cables, and lighting systems in particular may induce hum in microphones. A mic's hum sensitivity gives an indication of how susceptible it is to this kind of interference. Values are 3 $\mu$V/5 $\mu$T for dynamic mics with hum compensation coil, 30 $\mu$V/5 $\mu$T for dynamics without compensation coil (D 70, D 80, D 90, D 95, D 190, D 310, D 1200), and up to 10 $\mu$V/5 $\mu$T for condenser mics.

In practice, though, it is the microphone cables, most of all unbalanced cables and mixer inputs, that are most likely to pick up hum.

IMPEDANCE

Internal resistance of a microphone measured at 1000 Hz. Knowing a microphone's impedance you can compute the required load impedance, i.e., the input impedance of your mixer or tape recorder, which, as a rule of thumb, should be at least 3 times the microphone impedance.

MIKING TECHNIQUES

Miking techniques are a matter of trial and error. But remember one fundamental caveat: never put your hand over the rear sound entries or else you will destroy the microphone's polar pattern and create a feedback problem or plain bad sound.

INSTRUMENT MICROPHONE

AKG has designed several microphones specifically for instrument pickup including the D 112 for bass instruments or the D 125 for percussive instruments. Other models have turned out over the years to be sonically ideal for certain instruments, like the D 190 for tom-toms or the D 1200 for horns.

MAXIMUM SPL

Maximum Sound Pressure Level a microphone can process without introducing more than a specified amount of "Total Harmonic Distortion" (1% or 0.5%), in other words, without distorting the signal. Usually measured at 1 kHz, so bass range distortion may not show up. For the ULS Series, however, it is specified from 30 through 20,000 Hz.

POLAR PATTERN

Microphones "hear" differently in different directions. Their polar patterns indicate the way they hear. Omnidirectional microphones ("omnis") hear equally well in all directions, all others prefer one (unidirectional) or two (bidirectional) directions. The so-called polar diagram shows the three-dimensional "hearing performance" of a microphone as a single curve. It is sufficient to plot only one half of the polar diagram (0° to 180°) since the other half (180° to 360°) is symmetrical, anyway. The space thus gained is used to plot the directivity at several different frequencies (broken, dotted, solid lines).
Shown below is the hypercardioid pattern of the C 414 B-UlS.

At 125 Hz (solid line) sensitivity is down 17 dB (referenced to 0°) at 150° at 8,000 Hz it is down 10 dB at 150° (dash-dotted line, right hand half). 150° means 150° left, right, up, and down (see three-dimensional diagrams).

POP NOISE

In order to avoid those unpopular "pop" noises on stage remember the following:

- Sing across the mic head.
- Interestingly, pop noises are worst about 2 in. from the mic. So move closer or further away.
- Perhaps use an extra foam wind-screen or a special pop screen. See Accessories.

PROXIMITY EFFECT

Anyone using microphones knows that moving very close to the microphone will boost the bass and create a full, powerful sound. But there's more to know about proximity effect:

1. Not all microphones have proximity effect. There is none in omni directional microphones and hardly any in two-way mics. This is why two-way models like the D 222 are popular with reporters. Taking too close to the microphone will not make the words unintelligible as often happens with typical vocal microphones on stage. However, two-way mics lack the "power" associated with vocal mics.

2. Most condenser microphones have a somewhat different kind of proximity effect. The C 585, for instance, provides less "guts" at lip contact than, say, the D 330 while its sound changes less with increasing working distance. Thus, the C 535 is ideal for singers who do not "eat" their microphone and know their microphone technique.

SIGNAL-TO-NOISE (S/N) RATIO

The S/N ratio is the difference between the reference level of 1 Pa (94 dB at 1 kHz) and the A-weighted equivalent noise level. Therefore, a lower S/N ratio means higher noise.

STUDIO MICROPHONE

AKG studio microphones are high quality precision instruments. Using condenser or two-way dynamic transducers, they feature a frequency response covering the entire audio spectrum as well as excellent transient response. Therefore, they give superb results for instruments rich in overtones (cymbals, hi-hat, snare drum, high pitched percussions) and in far miking.
TRANSIENT RESPONSE

The ability of a microphone to follow sudden (percussive) sound events immediately. Transient response depends on diaphragm mass, transducer damping factor, etc.

VIBRATIONAL NOISE

A microphone picks up not only airborne sound but also mechanical vibrations such as impact noise, footfall, handling, or cable noise. Such unwanted noise can be reduced by special design features (transducer shock mounts, compensation systems, or bass rolloff).

VOCAL MICROPHONE

A microphone specifically designed for vocal use on stage. Vocal mics incorporate a pop screen, transducer shock mount to reduce handling and impact noise, and are particularly rugged so they will survive the occasional drop from the stand. Many have an upper midrange (3 to 8 kHz) peak to make the voice cut through.

In the studio, vocals are ideally recorded from 30 cm (1 ft.) or even farther, usually with studio microphones such as the C 414 B-U.S.

NOTE: Certain products may not be available in your country. Product designs and specifications may vary from country to country.
### Reverberation units:
- Etching technique for springs (all equipment)
  - **Canada**: 897,784
  - **USA**: 3,566,310
- Dented spring (all equipment)
  - **Canada**: 899,917
  - **USA**: 3,697,059
- Compensation (all equipment)
  - **Canada**: 938,476
  - **USA**: 3,719,928
- Spring diversion BX 15
  - **Canada**: 998,121
  - **USA**: 3,933,345
- MFB decay-time adjustment (all equipment)
  - **USA**: 3,742,140
- Mechanical damping of coil springs
  - **USA**: 3,754,745

### Microphones:
- Sintered microphone cap 0 202, 0 222, 0 190, 0 590, 0 130
  - **USA**: 3,652,810
- Condenser capsule CE 31
  - **USA**: 3,930,128
- Movable transducer to suppress unwanted mechanical noise (D 321)
  - **Austria**: 350,649
  - **France**: 2,392,571
  - **GB**: 1,591,216
  - **Japan**: 1,118,443
  - **USA**: 4,199,667
  - **West-Germany**: 2,821,617
- Preamplifier for C 460 B:
  - **Austria**: 377,873
  - **GB**: 2,108,797
  - **USA**: 4,521,741

### Pickups:
- Knife edge suspension (TS System)
  - **Austria**: 341,798
  - **Canada**: 1,069,057
  - **Denmark**: 139,500
  - **France**: 2,275,840
  - **GB**: 1,448,033
  - **USA**: 4,054,756
  - **West-Germany**: 2,526,903
- Production method for pickups
  - **Austria**: 365,900
  - **Canada**: 1,127,977
  - **France**: 2,467,458
  - **GB**: 2,060,976
  - **Swiss**: 647,117
  - **USA**: 4,265,696
  - **West-Germany**: 3,037,909
- Electromagnetic transducer for pickups P 10, P 25, P 100
  - **Austria**: 361,724
  - **Canada**: 1,151,557
  - **Denmark**: 150,440
  - **Europe**: 0,019,791
  - **USA**: 4,367,544
  - **West-Germany**: 8,012,832

### Headphones:
- Gimbal-suspended earpieces in K 340, K 240, K 141
  - **Japan**: 1,307,984
- Self-adjusting headband in K 340, K 240, K 141, K 260
  - **Austria**: 321,386
  - **Japan**: 893,720
  - **USA**: 3,919,951
  - **West-Germany**: 2,425,634
- Integrated open headphones K 240 Monitor
  - **Austria**: 334,992
  - **France**: 2,307,425
  - **GB**: 1,521,582
  - **Japan**: 1,186,594
  - **USA**: 4,071,717
  - **West-Germany**: 2,814,729
- Passive radiators in K 340, K 240
  - **Canada**: 1,032,479
  - **USA**: 4,035,278
- Two-way system K 340
  - **Canada**: 996,162
  - **USA**: 3,943,304
- Two principle in headphone transducers K 4, K 145
  - **Austria**: 366,862
  - **Canada**: 1,178,365
  - **USA**: 4,447,678
- Headphones with microphone (K 10, K 18)
  - **USA**: 4,138,598
- Ear cushions
  - **Austria**: 377,664
  - **USA**: 4,572,324

### General:
- Plastic encased magnetic systems
- Plastic encased magnetic systems
- Most of the dynamic AKG microphone or headphone capsules are built according to one of the following inventions.

### AKG Patents

**Microphones:**
- Sintered microphone cap 0 202, 0 222, 0 190, 0 590, 0 130
  - **USA**: 3,652,810
- Condenser capsule CE 31
  - **USA**: 3,930,128

**Pickups:**
- Knife edge suspension (TS System)
  - **Austria**: 341,798
  - **Canada**: 1,069,057
  - **Denmark**: 139,500
  - **France**: 2,275,840
  - **GB**: 1,448,033
  - **USA**: 4,054,756
  - **West-Germany**: 2,526,903

**Headphones:**
- Gimbal-suspended earpieces in K 340, K 240, K 141
  - **Japan**: 1,307,984
- Self-adjusting headband in K 340, K 240, K 141, K 260
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**General:**
- Plastic encased magnetic systems
- Most of the dynamic AKG microphone or headphone capsules are built according to one of the following inventions.
### MICROPHONE ACCESSORIES GUIDE

**Condenser Microphones**

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<th>W 17 A</th>
<th>W 22</th>
<th>W 23</th>
<th>W 29*</th>
<th>W 31</th>
<th>W 32</th>
<th>W 46</th>
<th>SA 18/1 B</th>
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<tbody>
<tr>
<td>Windscreens</td>
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</table>

* Rear windscreens for D 202 E 1 and D 900 E
** Front windscreens for D 202 E 1

Please note: Use both the W 9 A + W 29 for D 202 E 1 and W 9 A + W 19 for D 900 E
### Dynamic Microphones

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<td>W 17 A</td>
<td>Windscreens</td>
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<td>W 22</td>
<td>Windscreens</td>
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<tr>
<td>W 23</td>
<td>Windscreens</td>
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<td>W 29‡</td>
<td>Windscreens</td>
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<td>W 31</td>
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<td>W 32</td>
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<td>W 46</td>
<td>Windscreens</td>
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<td>PF 20</td>
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<td>SA 181 B</td>
<td>Stand Adapters</td>
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<td>SA 182 B</td>
<td>Stand Adapters</td>
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<td>SA 183 B</td>
<td>Stand Adapters</td>
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<td>SA 26</td>
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<td>SA 38/H</td>
<td>Stand Adapters</td>
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<td>SA 40</td>
<td>Stand Adapters</td>
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<td>SA 41/1</td>
<td>Stand Adapters</td>
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<td>SA 70/3</td>
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<td>H 9</td>
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<td>H 10</td>
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<td>S 50</td>
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<tr>
<td>M SH 33</td>
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<td>M SH 52</td>
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<tr>
<td>M SH 53</td>
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<tr>
<td>M SH 80</td>
<td>Goosenecks (Flexible Shafts)</td>
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</tbody>
</table>

Special accessories only delivered with certain microphones are not listed in this chart. These items may be purchased as spare parts through the AKG Service Organization. This Accessories Guide relates to optional accessories, which may also be purchased from AKG like any other AKG product. Some of these accessories may also be supplied as standard with one or more microphones and are marked in this chart by " ● " . The optional accessories are marked by " ○ " .
### PROFESSIONAL USER NET PRICES

**STEREO CONDENSER MIC SYSTEMS**
- C34, Small Diaphragm, Multi Pattern $2295.00
- C422, Large Diaphragm, Multi Pattern $2995.00

**LARGE-DIAPHRAGM CONDENSER MIC SYSTEMS**
- The AKG Tube, Multi Pattern $2295.00
- C414B UL, Multi Pattern $995.00
- C414B HL, Multi Pattern, Transformerless $1195.00

**C451/C460 SYSTEM MODULAR CONDENSER MICS**
- C451H System Nickel, Cardioid $400.00
- C451H R System, Cardioid $495.00
- C460B+CK61 ULS, Cardioid $550.00
- C460B+CK62 ULS, Omni $550.00
- C460B+CK63 ULS, Hypercardioid $550.00
- C460B+CK1X System, Cardioid $775.00
- C451EB+CK9 System, Long Shotgun $1100.00
- C451EB Preamp $335.00
- C460B Preamp $420.00
- CK1 Capsule, Cardioid $145.00
- CK1X Capsule, Cardioid $200.00
- CK2X Capsule, Omni $200.00
- CK3 Capsule, Hypercardioid $145.00
- CK3X Capsule, Hypercardioid $200.00
- CK5 Capsule, Cardioid $275.00
- CK8 Capsule, Short Shotgun $260.00
- CK8 Capsule, Short Shotgun $365.00
- C9 Capsule, Long Shotgun $320.00
- CK2 Capsule, Omni $145.00
- CK61 ULS, Cardioid $170.00
- CK62 ULS, Omni $170.00
- CK62 DF, Omni $170.00
- CK63 ULS, Hypercardioid $170.00
- AS0 10, Pad $50.00
- AS0 20, Pad $50.00
- AS1, Swivel $100.00
- AS1, Swivel for C460B $125.00
- VR1, 12" Angled Extension Tube $95.00
- VR2, 52" Angled Extension Tube for C451 $315.00

**C451/C460 SYSTEM (Cont)**
- VR12, 52" Straight Extension Tube for C451 $315.00
- VR61, 12" Black Angled Ext. Tube for C460B $175.00
- VR62, 40" Black Angled Ext. Tube for C460B $315.00

**PRE-POLARIZED CONDENSER MICS**
- C401 B, Acoustic Contact Pickup $85.00
- C401 B9, As Above w/ Power Supply $140.00
- C402 B, Acoustic High Frequency Pickup $95.00
- C408 B, Clip on Drum Mic $165.00
- C408 B9, As Above w/ Power Supply $220.00
- C409 B, Clip on Wind Instrument Mic $165.00
- C409 B9, As Above w/ Power Supply $220.00
- C410, Headset Mic $215.00
- C410 B9 Headset Mic w/ Battery Power Supply $260.00
- C522, X-Y Stereo $995.00
- C525 S, Hypercardioid, 1.5V Battery $195.00
- C355F B, Cardioid $350.00
- C562, Boundary Type, Omni $435.00
- C567E, Omni Lapel $275.00
- CK67, L, Lavaliere Mic, Omni $155.00
- C568 B, Short Shotgun $350.00
- Q580 Supercardioid Gooseneck, "Pencil-type" $90.00
- C747 Hypercardioid, "Pencil-type" $400.00
- C1000S Cardioid w/ On-Off, 9V Battery $325.00

**POWER SUPPLIES FOR CONDENSER MICROPHONES**
- B9 Two mic 9 Volt Battery, for C400 Series only $55.00
- B18, One Mic 2x9 Volt Battery $95.00
- N62E, Two Mic AC $110.00
- N62E-T, Two Mic AC w/ Transformers $180.00
- N66E, Six Mic AC $315.00
- A52, Custom Module $35.00
- A48V DC to DC converter supplies 48V, for use with new B18 $125.00

**DYNAMIC MICROPHONES**
- D12E, Cardioid $390.00

*Peaked and leaned leads, separate DC bias circuit.*
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<td>D202E1, TwoWay Cardioid</td>
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<td>D224E1, TwoWay Cardioid</td>
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<td>D320, Hypercardioid</td>
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<td>D321S, Hypercardioid, w/ Eq</td>
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<td>D330BR, Hypercardioid, w/ Eq</td>
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<td>D510B, Omni Gooseneck</td>
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<td>D541Black, Cardioid Gooseneck</td>
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<th><strong>POP FILTERS</strong></th>
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<td>PF20 Stocking-type</td>
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<td>H9 Use with H10, mounting flange</td>
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<td>H10 Stereo Bar</td>
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<td>H15 T for AKG Tube Mic</td>
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<td>H15/6 for C33, C34</td>
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<td>H15/9 for C422</td>
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<tr>
<td>H16 for C567E, Belt-Clip</td>
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<td>H17A for C414</td>
</tr>
<tr>
<td>H20 for C567E, CK67, Tie Tac</td>
</tr>
<tr>
<td>H21 for C567E, CK67, Tie Bar</td>
</tr>
<tr>
<td>H30 Universal Shock Mount</td>
</tr>
<tr>
<td>H38 for C56EB, C51, C460</td>
</tr>
<tr>
<td>H42 for C422</td>
</tr>
<tr>
<td>H45 Cable Clothing Clip, Q-series</td>
</tr>
<tr>
<td>H46 for CKX Capsules</td>
</tr>
<tr>
<td>H47 for C747</td>
</tr>
<tr>
<td>H48 for CKX Capsules</td>
</tr>
<tr>
<td>H52 Stereo Bar for CK1X, CK3X</td>
</tr>
<tr>
<td>H70 Use with SA70</td>
</tr>
<tr>
<td>Item Code</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>TM1</td>
</tr>
<tr>
<td>TM2</td>
</tr>
<tr>
<td>TM3</td>
</tr>
<tr>
<td>TMSM</td>
</tr>
</tbody>
</table>

### MICROPHONE TABLE STANDS

- ST5 | $35.00
- ST46 | $45.00
- ST305 | $99.00

### MICROPHONE & LOUDSPEAKER STANDS & BOOMS

- KM5, Short Round Base | $50.00
- KM10, Round Base | $50.00
- KM10-5, Round Base | $50.00
- KM109, Tripod Base | $45.00
- KM200, Shock Suspended Tripod Base | $90.00
- KM201A, Tripod Base | $60.00
- KM201B, Black Tripod Base | $60.00
- KM211, Boom | $30.00
- KM211, Black Boom | $30.00
- KM2111, Black Boom | $30.00
- KM2113, Black Boom | $30.00
- KM2114, Large Stand w/ Boom | $195.00
- KM2115, Table Stand | $10.00
- KM251, Tripod Base | $65.00
- KM251B, Black Tripod Base | $65.00
- KM255, Short Stand w/ Long Boom | $75.00
- KM259, Short Stand w/ Boom | $80.00
- KM365, Black, Tripod Base | $60.00
- KM375, Red, White, Blue, Black, Chrome, Tripod Base w/ Boom Arm | $85.00

### STAND ACCESSORIES

- KM216, 3-8" Male to 5-8"-27 Female | $3.00
- KM217, 3-8" Female to 5-8"-27 Male | $3.00
- KM160, Ash Tray | $8.00
- KM1602, Glass Holder | $10.00
- KM221C, Flange | $10.00
- KM235, 1 Stereo Bar | $10.00
- KM327, Table Clamp | $10.00
- KM238, Side Bar | $10.00
- KM239, 2 Quick Release | $10.00

### FLEXIBLE GOOSENECKS

- MSH70 for C747, 5-5" | $22.00
- MSH80 for C747, 15" | $55.00
- LGN6, Chrome or Black 5-8" Threaded | $5.95
- LGN13, Chrome or Black 3-8" Threaded | $8.95
- LGN19, Chrome or Black 5-8" Threaded | $10.95

### FLEXIBLE GOOSENECKS (Cont.)

- LMF1, Mounting Flange, Male, Chrome or Black | $2.95
- LCE1, Cable Exit Chrome | $4.95

### FLEXIBLE 25 FOOT CABLE ASSEMBLIES

- MC25, XLR-XLR | $19.00
- MC25F, XLR-Striped | $16.00
- MC25F, XLR Phone Plug | $20.00
- MC25RC, XLR-Right Angle XLR | $22.00
- MC25S, XLR-XLR w/ On-Off | $28.00
- MC25T, XLR-XLR w/ Transformer | $31.00
- MC25TS, XLR-XLR w/ Trans. & On-Off | $36.00
- MC50, (50 foot) XLR-XLR | $31.00

### SPECIAL CABLE ASSEMBLIES

- MK23, 20 ft for C414E1 Remote | $110.00
- MK33, 20 ft for C3 and C414E1 Remote | $125.00
- MK42, 20 ft for C34 and C422 | $170.00
- MK46, 3-1484 ft for CKX Capsules | $200.00
- MK52, 3, XLR for C522 | $55.00
- MK52, 3, 3.5 Stereo for C522 | $35.00

### SHOTGUN-MICROPHONE CARRYING CASE

- CC9 for D900 and C451EB, CK9 | $85.00

### STEREO HEADPHONES

- K2, Supra-aural | $45.00
- K211V, Supra-aural w/ Level and Stereo-Mono Control Box | $60.00
- K45, Supra-aural | $60.00
- K55, Supra-aural | $50.00
- K130, Supra-aural | $70.00
- K135, Supra-aural | $80.00
- K135S, Supra-aural | $85.00
- K141M, Supra-aural | $100.00
- K145S, Electrostatic Dynamic, Supra-aural | $110.00
- K240M, Circumaural | $120.00
- K240F, Circumaural | $150.00
- K260, Circumaural | $170.00
- K270, Circumaural, Sealed Earcups | $195.00
- K290, Circumaural | $195.00
- K340, Electrostatic Dynamic, Circumaural | $235.00

### HEADPHONE/BOOM-MICROPHONE SET

- KH, Dual w/ Noise Cancelling Mic | $75.00
- Q15, 10 Single Earpiece w/ Condenser Mic | $145.00
- Q15, 20 Single Earpiece w/ Dynamic Mic | $165.00
- Q24, 10 Dual Earpieces w/ Condenser Mic | $165.00
- Q24, 20 Dual Earpieces w/ Dynamic Mic | $185.00
- Q31, Dual Earcups, No Microphone | $120.00
- Q32, Single Earcup, No Microphone | $105.00
- Q34, Dual w/ Noise Cancelling Mic | $145.00
- Q35, Single w/ Noise Cancelling Mic | $120.00

*continued overleaf*
**HEADPHONE/BOOM-MICROPHONE SET (Cont)**

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Price</th>
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<tbody>
<tr>
<td>T301 6dB Headphone Attenuator for Q34, Q35</td>
<td>$35.00</td>
</tr>
<tr>
<td>T302 Carbon Equivalent Amp for Q34 Series</td>
<td>$35.00</td>
</tr>
<tr>
<td>T303 Amp w/Squelch for Q-Series</td>
<td>$70.00</td>
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**REVERBERATION SYSTEMS, SPRING**

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>BX25E Two Channel</td>
<td>$5500.00</td>
</tr>
<tr>
<td>BX25ED Two Channel w/Digital Delay</td>
<td>$8400.00</td>
</tr>
<tr>
<td>M250 Digital Delay Module for BX25E</td>
<td>$3200.00</td>
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**REVERBERATION/EFFECTS, DIGITAL**

<table>
<thead>
<tr>
<th>Model</th>
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<tbody>
<tr>
<td>ADR 68K Version 4.0</td>
<td>$6990.00</td>
</tr>
<tr>
<td>Version 4.0 Upgrade Kit</td>
<td>$1995.00</td>
</tr>
<tr>
<td>ADR 68K, Audio Effects Processor</td>
<td>$4995.00</td>
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<tr>
<td>MSP176, Stereo Processor</td>
<td>$995.00</td>
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**DIGITAL DELAY**

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>TDU8012 1 in 2 out</td>
<td>$5500.00</td>
</tr>
<tr>
<td>TDU8014 1 in 4 out</td>
<td>$6600.00</td>
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<tr>
<td>TDU8016 1 in 8 out</td>
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<tr>
<td>TDU8018 1 in 16 out</td>
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<tr>
<td>TDU8022 2 in 4 out</td>
<td>$6400.00</td>
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<tr>
<td>TDU8024 2 in 8 out</td>
<td>$7500.00</td>
</tr>
<tr>
<td>TDU8026 2 in 16 out</td>
<td>$8600.00</td>
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<tr>
<td>TDU8028 2 in 32 out</td>
<td>$9700.00</td>
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<tr>
<td>R800, Remote</td>
<td>$2000.00</td>
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</table>

**RECORD CLEANING BRUSH**

<table>
<thead>
<tr>
<th>Model</th>
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<tr>
<td>RCBI</td>
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**STEREO PHONOCARTRIDGES (Cont)**

<table>
<thead>
<tr>
<th>Model</th>
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<tbody>
<tr>
<td>P25S</td>
<td>$250.00</td>
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<tr>
<td>P15S</td>
<td>$175.00</td>
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<tr>
<td>P10 Studio</td>
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<tr>
<td>P10S</td>
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<tr>
<td>Super Nova P8ES</td>
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<td>P5ED</td>
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<tr>
<td>P4</td>
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<tr>
<td>P4DP, Pmount</td>
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**REPLACEMENT STYLUS FOR PHONOCARTRIDGES**

<table>
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<th>Model</th>
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<tbody>
<tr>
<td>X25S</td>
<td>$150.00</td>
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<tr>
<td>X15S</td>
<td>$82.50</td>
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<tr>
<td>X10 Studio</td>
<td>$60.00</td>
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<tr>
<td>X10S</td>
<td>$57.50</td>
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<tr>
<td>vdH IIS (for Super Nova)</td>
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<tr>
<td>X5ED</td>
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<tr>
<td>X4</td>
<td>$25.00</td>
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**WIRELESS MICROPHONE SYSTEMS (174-216 MHz)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>C410, Headset w/condenser mic</td>
<td>$3277.00</td>
</tr>
<tr>
<td>C535, Hand-held condenser, Cardioid</td>
<td>$3262.00</td>
</tr>
<tr>
<td>C567, Lavalier condenser, Omni</td>
<td>$3257.00</td>
</tr>
<tr>
<td>D21L, Hand-held dynamic, Hypercardioid</td>
<td>$3167.00</td>
</tr>
<tr>
<td>D330, Hand-held dynamic, Hypercardioid</td>
<td>$3167.00</td>
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**WIRELESS MICROPHONE HEADS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>C410WL, Headset w/condenser mic (Requires A85)</td>
<td>$195.00</td>
</tr>
<tr>
<td>C535WL, Hand-held condenser, Cardioid</td>
<td>$295.00</td>
</tr>
<tr>
<td>C67WL, Lavalier condenser, Omni (Requires A85)</td>
<td>$175.00</td>
</tr>
<tr>
<td>D21WL, Hand-held dynamic, Hypercardioid</td>
<td>$180.00</td>
</tr>
<tr>
<td>D330WL, Hand-held dynamic, Hypercardioid</td>
<td>$180.00</td>
</tr>
<tr>
<td>A85, Module allows use of any Dynamic Mic</td>
<td>$70.00</td>
</tr>
</tbody>
</table>

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