

AKG.RECORDING.MICROPHONES



**FEATURING
THE PROJECT
STUDIO LINE**



AKG RECORDING

CLASSIC STUDIO TECHNOLOGY FOR MUSICIANS

According to the audio press, “good studio microphones are no longer a luxury” and the choice of budget studio microphones has been growing steadily. While formerly only the large studios were able to make high quality recordings with high quality microphones, the growing supply of affordable high quality home recording equipment dramatically increased the demand for excellent, cost efficient studio microphones.

The New PROJECT STUDIO LINE from AKG

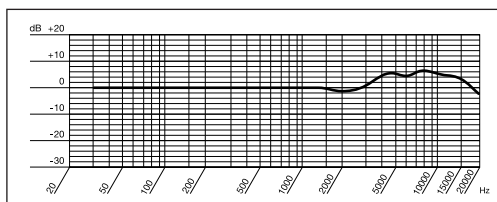
Responding to this demand, AKG developed the PROJECT STUDIO LINE comprising carefully designed recording microphones tailored to meet the specific requirements of musicians and their equipment. Due to new automated production processes for microphones, musicians and studios can now purchase high quality microphones at a fraction of the previous cost. Musicians and studios choosing PROJECT STUDIO LINE microphones benefit from AKG’s decades of engineering know-how.

The AKG Large-diaphragm Technology

The heart of any high quality studio condenser microphone is its transducer capsule. The specific sound of a microphone depends on the way the transducer diaphragm is made and installed. For over 50 years, AKG has been making large-



The legendary original, handmade AKG 1-inch capsule of a vintage C 12. This capsule design typical for AKG microphones is the basis of the worldwide reputation of AKG microphones.



The typical “warm” AKG large-diaphragm sound is the result of a response dip between 2 kHz and 3 kHz and a boost in the range from 4 kHz to 15 kHz.

diaphragm condenser microphones with a vibrating diaphragm diameter of one inch (25 mm). Electrical contact is established by the clamping ring so the entire diaphragm can vibrate freely. This capsule design typical of AKG microphones is the basis of the reputation of our large-diaphragm microphones such as the C 12 that achieves prices as high as US\$ 6,000 on the second-hand market all over the world. AKG is the only worldwide manufacturer of freely vibrating, perimeter mounted 1-inch diaphragms with more than 50 years of expertise.

The Secret Behind AKG’s Large-diaphragm Sound

It is the specific design of our diaphragms that shape the frequency response typical of AKG microphones. Between 2 kHz and 3 kHz, there is a 2 to 3 dB dip in sensitivity that is wide enough to remove any harshness and aggressiveness from the human voice. In addition, the diaphragm is designed to boost the frequency range from 4 kHz to 15 kHz. This high-frequency emphasis contributes to actual and perceived “up-front localization” as demonstrated by measurements and listening tests. This is why AKG microphones are so popular worldwide. They will cut through the mix naturally and the signal will be up front, even at low levels.



1. VOCALS

To get a contemporary, very intimate vocal sound, we recommend using a **cardioid** microphone **approximately 6 to 12 inches (15 to 30 cm) away** from the singer and switching the **bass rolloff filter** in. The supplied foam windscreen helps suppress plosives (such as “p” or “t”). For optimum noise rejection, use a separate pop screen such as the AKG PF 80. AKG C 12 VR and AKG SolidTube mic’s are extremely popular internationally because of their “warm, intimate” sound.

We recommend adding the vocalist/musicians’ own track to their headphone monitor signal for better control of their own voice/instrument. Specializing in acoustics, **AKG makes the most popular headphones for recording studio applications worldwide.** (Also refer to page 13)

MICROPHONES

FEATURING THE PROJECT STUDIO LINE

Warning!

There is a wide choice of so-called “large-diaphragm microphones” on the market. Many of these are not large-diaphragm microphones, even though a bulky case and large transducer housing may suggest they are. Even reviewers for audio magazines sometimes get confused about the details. Don’t be fooled! Proceed with caution! **Anything less than 1 inch in diameter is not a genuine large diaphragm**; Far East and other low-cost imitations may look like large-diaphragm microphones, but will never equal the sound of the real thing.



AKG is the only worldwide manufacturer of freely vibrating, perimeter mounted 1-inch diaphragms with more than 50 years of expertise. AKG studio microphones are optimized to cut through any mix naturally and place the signal up front even at low levels.



TIMBRES AND COLORS - THE ART IS YOURS!

Just as every instrument and voice have unique individual timbres, every AKG condenser microphone has its own unmistakable sound. **AKG large-diaphragm designs** provide a warm, smooth, and silky sound that cuts through any mix, while **AKG small-diaphragm designs** deliver an extremely accurate, crisp sound. Every model has its own “personality”. Therefore, producers use a number of different microphones in order to give their productions a personal touch. A single “universal microphone” could never reproduce such a rich spectrum of timbres. **We therefore recommend listening to and trying many microphones. Let your ears make the choice.**



2. BACKING VOCALS/CHOIR

Variation 1: If enough tracks are available, we recommend recording each voice separately, one after the other, placing the microphone as for lead vocals.

Variation 2: When simultaneously recording several voices with a separate microphone for each vocalist, use hypercardioids in order to prevent leakage, particularly if the microphones are spaced closely.

Variation 3: When using a single microphone for several vocalists, set its polar pattern to omni or cardioid and place the choir in a wide semicircle around the microphone. On large mixed choirs, use a spot microphone for each voice. You may also consider using an additional stereo microphone.

In acoustically perfect environments, a single stereo microphone or a matched pair of mono microphones (ideally, two AKG C 414 B-TL II) will often be enough to make a very good recording.



C 12 VR

VINTAGE REVIVAL - THE LEGEND LIVES ON



- Recreates the legendary AKG C 12
- Nine remotely selectable pickup patterns including omnidirectional, cardioid and figure-eight
- Complete with many useful accessories and aluminum carrying case

One of the most famous tube microphones in the history of recording was the legendary **AKG C 12**. In spite of changes in microphone engineering, these microphones in good condition are still very much sought after. Therefore, studio engineers vigorously demanded a re-run. The **C 12 VR** is an exact replica, from the capsule to the tube. The only difference is that its self noise and some components were optimized to meet the current state of the art. No less than nine selectable polar patterns, the legendary large-diaphragm capsule, and an original 6072 vacuum tube provide a sound that is simply beyond words. The C 12 VR comes complete with an aluminum carrying case, power supply, cable, wind-screen, and spider type shock mount.

It is not only a microphone but also a true investment.

"Those who are not familiar with the original should listen to the C 12 VR and hear what they have been missing."

**Dave Foister
STUDIO SOUND**

"... and the C 12 VR blew away the competition!"

**Michael Cooper
MIX**

Studio
Sound

MIX



3. ELECTRIC GUITAR/-BASS

Electric Guitar

Point a cardioid microphone at the speaker diaphragm slightly off-center, from a **distance of about 3 to 6 inches (8 to 15 cm)**. Switch the **preattenuation pad in**. Also consider using a **room microphone**.

Electric Bass

Place the microphone in the **same way as for the electric guitar**. You may also use a **DI box or the line output** on the bass amp to add the direct signal to the bass amp track.

If you use an **unbalanced cable (TS jack cable)**, keep it **short (7 feet / 2 m max.)** in order to avoid picking up hum.



C 414 B

C 414 B-ULS / C 414 B-TL II

THE CLASSIC TWINS



- **Classic large-diaphragm reference microphone**
- **Selectable cardioid, omnidirectional, figure eight and hypercardioid polar patterns**
- **Two-stage preattenuation pad and bass cut filter**
- **High sound level capability (up to 160 dB SPL)**

Some things cannot be improved. These include the legendary transducer capsule of the AKG C 12 and the C 414, **THE reference microphone** in the international audio industry since 1971. The C 414 has got what it takes: four selectable polar patterns, switchable 10 dB and 20 dB pads, and two highpass filters.

C 414B-ULS

Suitable for quality instrument miking.

Reference microphone for almost all comparative microphone tests.

C 414B-TL II

With C 12 capsule replica and transformerless output stage.

A classic with a distinctive timbre for vocal recording and distance miking.

"The results in all were excellent. The stereo imaging was natural, precisely pinpointed and stable, noise virtually non-existent."

Dave Foister
STUDIO SOUND



When miking instruments, e.g., a bass drum, the microphone may have to deal with extremely high sound pressure levels. The actual sound pressure level at the microphone transducer does not necessarily depend on the loudness of the instrument but rather on the distance of the microphone from the sound source. All AKG studio microphones have a sound pressure level capability of at least 140 dB SPL. Low quality microphones will introduce distortion at much lower levels.

4. AC. GUITAR/VIOLIN/VIOLA

Acoustic Guitar

A great way to mic up a guitar is to place a **cardioid, large-diaphragm microphone** near the **sound hole** and a **small-diaphragm microphone** near the **bridge** or pointing at the body from below the rear. Find the desired sound by experimenting with the levels of the two microphones in the mix.

Violin, Viola

Be sure to use **high quality cardioid condenser microphones**. Align them at **right angles to the sound board**, pointing at the **f holes** from a **height of about 6 to 8 feet (1.8 to 2.5 m)**. Mic the **viola** in the same way as the violin but from a little further away.



SOLIDTUBE

EXPERIENCE THE WARMTH



- Vacuum tube large-diaphragm microphone
- Cardioid polar pattern for multiplicity of applications
- Exceptionally natural, warm sound ideal for digital recording
- Complete with many useful accessories and aluminum carrying case



The AKG SolidTube, the flagship of the PROJECT STUDIO LINE, is the first microphone that combines the sound of classic vacuum tube technology and the benefits of advanced solid state componentry at an affordable price. Mechanical ruggedness, high SPL capability, and low self noise are as natural SolidTube features as its warm tube sound. The heart of the SolidTube is the ECC 83 (12AX7) vacuum tube. It provides excellent transfer characteristics and is readily available from musical instrument dealers. A large output transformer completes the high performance electronic circuitry that produces the specific vacuum tube sound. A ground lift switch eliminates unexpected ground loops quickly and easily. Standard accessories include a spider type shock mount, pop screen, power supply, cable, and strong carrying case.



The “warm” sound of tube microphones is something of a myth for many engineers. In fact, tube microphones emphasize even harmonics and add low-level distortion

that the ear perceives as an enhancement to the sound. It is for this reason that tube microphones are often used for miking solo voices or instruments rich in overtones.

“The SolidTube has a smooth top-end response, with non of the high-frequency hype that is so common in bargain condensers. AKG’s newest tube microphone is a very good one. ... the SolidTube is the real thing at the right price.”

Loren Alldrin
PRO AUDIO REVIEW



5. DOUBLE BASS/CELLO

Double Bass

Aim a cardioid microphone at one of the f holes from a distance of about 16 inches (40 cm). If you have to record the double bass playing together with an ensemble, use a shorter working distance and a hypercardioid pattern in order to prevent leakage from other instruments into the bass microphone.

Cello

Mic the cello in the same way as the double bass using a cardioid and consider using an extra distant microphone. Set the level of the close-up microphone (the spot microphone in this setup) about 20 dB lower than the level of the distant (main) microphone.



C 4000 B

PERFECT IN THE MIX

- One of the most silent condenser microphones available today
- Selectable omnidirectional, cardioid, and hypercardioid polar patterns
- Extremely wide dynamic range
- Complete with pop screen and spider type shock mount

The C 4000B delivers superior sound at an unbeatable price, especially on vocals, brass, acoustic or electric guitar, and even inside the bass drum. With its selectable omni, cardioid, and hypercardioid polar patterns, the C 4000 B can handle every recording situation. AKG replaced the usual figure eight pattern with a hypercardioid so this top class microphone can be used on stage, too. The hypercardioid pattern also ensures high gain before feedback and minimum crosstalk. The wide dynamic range of the C 4000B provides enough headroom for all day-to-day recording situations. A transformerless output stage ensures exceptionally accurate low-end response. The large diaphragm tuned specifically for this microphone will enchant you with its unique state-of-the-art sound that will cut through the mix. Find out for yourself. Ask your dealer for a hands-on demonstration. Standard accessories include a spider type shock mount and an external wind and pop screen for extremely demanding situations.

"... it proved to be an excellent allrounder, with a distinct large-diaphragm character complemented by good detail and clarity."
Dave Foister
STUDIO SOUND

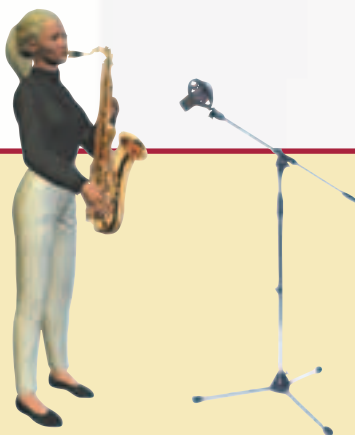
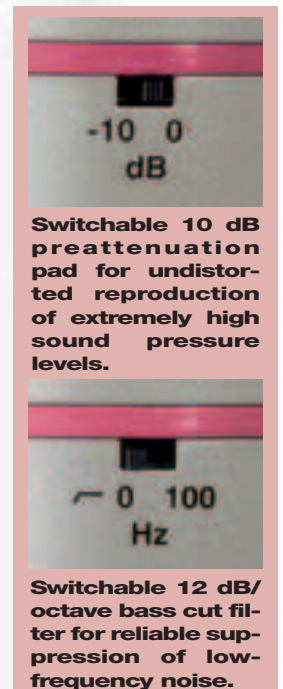
"In all cases the microphone produced excellent results."
Doug Mitchell
AUDIOMEDIA

"... this is a great mic in the tradition of previous AKG products. And the price makes it very affordable."
Mike Sokol
EQ

Studio
Sound

AUDIOMEDIA

EQ



6. TENOR/SOPRANO SAX

Aim a cardioid microphone roughly at the keys in the middle of the instrument. The saxophone projects its sound from the bell and all open keys so the radiation pattern is constantly changing. Most of the low frequencies are emitted by the bell because almost all keys are closed while most of the high frequencies emanate from near the mouthpiece. We recommend to place the microphone about 20 to 40 inches (0.5 to 1 m) away from the instrument in order to capture its entire sound spectrum without overemphasizing specific frequencies.



AKG SELECTION

RECOMMENDATIONS FOR RECORDING MICROPHONES

How to use this selection guide

There are no hard and fast rules for professional miking. There are too many factors that need to be considered to achieve the desired sound. Therefore, a seasoned professional engineer may place totally different microphones at totally different positions for the same instrument depending on the playing technique of each musician, the musical style, the acoustics of the recording environment, and above all the desired sound.

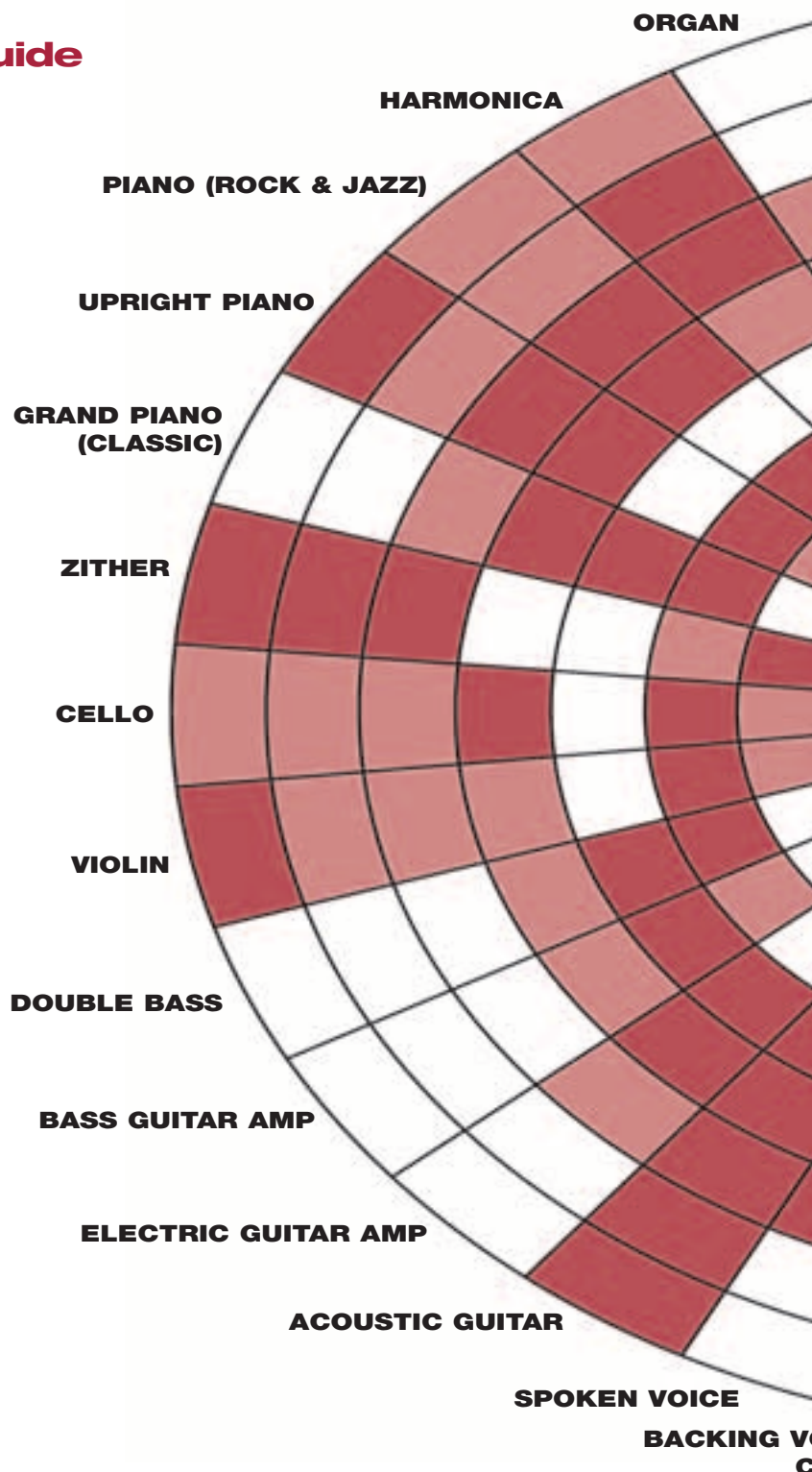
Thus, the only way to get the optimum sound is to experiment and use your ears as a reference. Go for what sounds best. This is why sound engineers or producers derive their standards of optimum miking from the best results they achieved in countless actual recording sessions. In a nutshell, playing an instrument and recording have one important thing in common: practice makes perfect.

The recommendations in this Selection Guide are meant as **starting points** for your own experimentation and practice rather than a set of rules to be followed blindly.

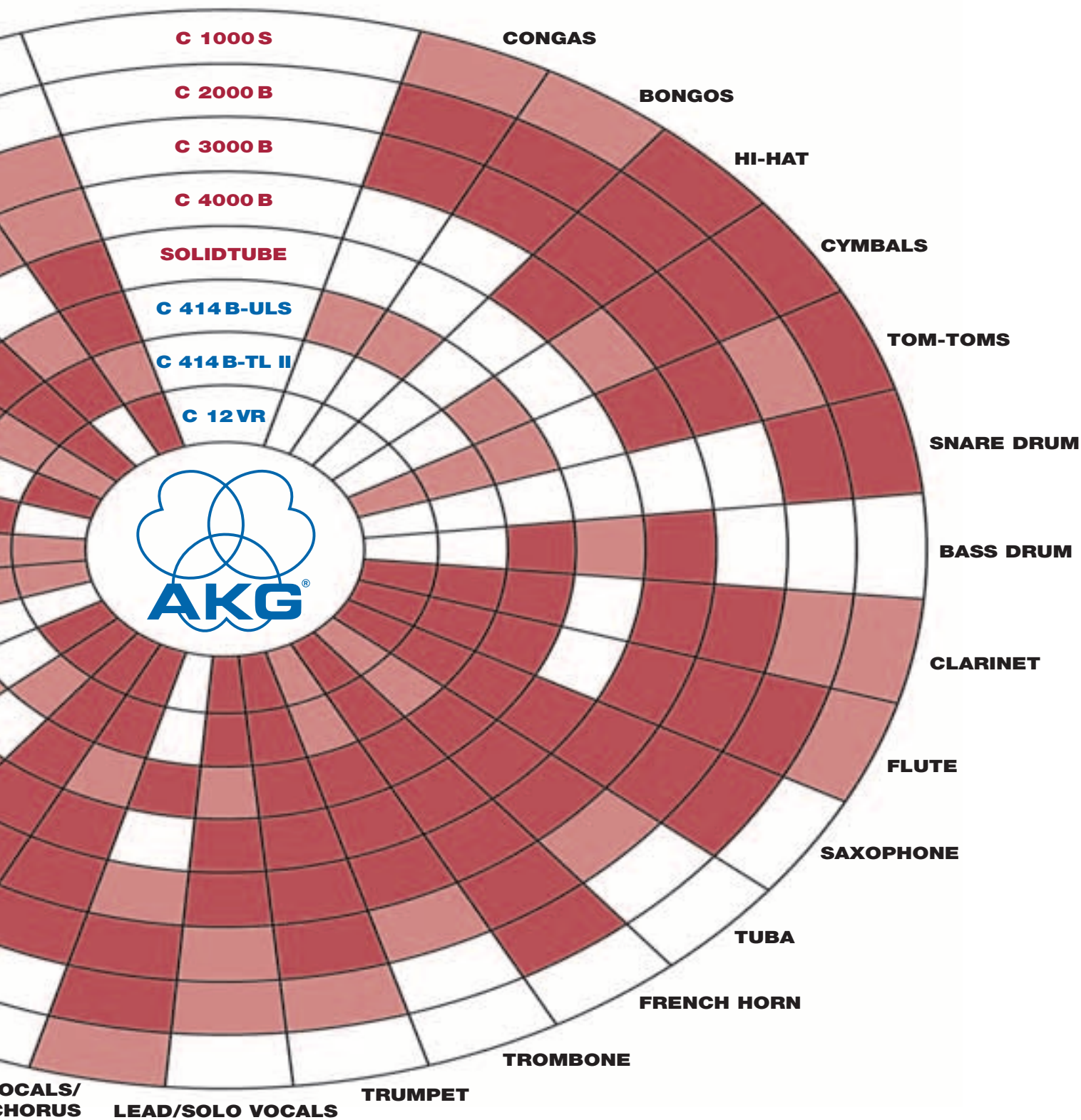
Let the wealth of timbres you can get by placing different microphones in different ways inspire you, and develop your own personal, unmistakable sound. **Recording microphones from AKG** will support your efforts with the more than fifty years of experience and acoustic competence built into them.

preferred

recommended



STATION GUIDE





C 3000 B

CLASSIC SOUND MADE AFFORDABLE

- **Highly affordable 1-inch large-diaphragm microphone**
- **Cardioid polar pattern for multiplicity of applications**
- **Suited for vocal and instrument miking**
- **Complete with spider type shock mount**

We have designed a special 1-inch large diaphragm that closely approximates the vibration performance of AKG's top studio microphones, but can be made at a much lower cost. Due to its surface area and special capsule tuning, the C 3000 B large diaphragm produces an exceptionally pleasing, smooth sound. The switchable 10 dB preattenuation pad immediately follows the transducer in the signal path, thus increasing the C 3000 B's SPL capability by a true 10 dB. Loud sound sources are therefore no problem. An acoustically optimized cardioid polar pattern makes the C 3000 B an excellent choice for both recording and live sound applications where high gain before feedback is paramount.

Hum: Electromagnetic interference, e.g., from fluorescent lamps or CRT displays, may cause hum. Remedies include moving the microphone and recording equipment to "clean" spots, using correctly shielded cables, or switching in the bass rolloff filter (e.g., on the C 3000 B).

"No mic can be ideal for all applications, but the C 3000B should be a good choice for those who can afford only one or two good mics for all their vocal and acoustic instrument recording."

Paul White
SOUND ON SOUND

SOUND ON SOUND

"If you liked the original C 3000, you're gonna love this. The build quality screams AKG at you, it looks fantastic in the shockmount, and the sound is warm yet transparent."

Seb Pecchia
MIX

MIX



7. CLARINET

Use a cardioid microphone and **direct it toward the lowest key**. To **minimize key noise**, place the microphone a little to one **side of the instrument**. The low mids and mids (between 800 Hz and 3 kHz) emanate from the keys only. As the pitch rises (upper mids and highs), more of the sound is generated from the bell. Frequencies generated by overblowing (above 5 kHz) are projected exclusively by the bell and will head straight for the ground. Therefore, a reflecting floor will provide a more brilliant sound.

8. FLUTE

Variation 1: Use two cardioid microphones, directing **microphone 1** at the **player's mouth** from a point 7 feet (2 m) away and about 8 feet (2.5 m) above the ground and placing **microphone 2** about **90 degrees to the right** of the flautist.

Variation 2: Use **one microphone** positioned as microphone 1 above but a **little further away**.

The flute projects its sound both from the mouthpiece and the first open hole. Up to 3 kHz the sound is mainly radiated along the flute player's line of sight.



C 2000 B

YOUR TICKET TO THE RECORDING WORLD



- **New small-diaphragm transducer (patent pending) with “large-diaphragm features”**
- **First choice for four and eight track recording formats thanks to high sensitivity and low self-noise**
- **Complete with professional, spider type shock mount**

One of the basic rules of recording is that the quality of the recorded signal is determined by the weakest link in the signal chain. Today, any microphone needs to match the high quality of 24-bit recording media. Therefore, the most important requirements for the C 2000 B were low self noise and extremely high sensitivity. This allows you to lay clean, noise-free tracks with no risk of noise levels from many individual tracks combining in the mix. Thanks to its high SPL capability, the C 2000 B is a highly versatile microphone that can be used even for extremely loud instruments. The C 2000 B will give perfect results for demo recordings, in the rehearsal room, or in the best recording studios.

Electrosmog Filter
Electrostatic and electromagnetic interference is a growing problem. Our condenser microphones are equipped with a so-called “electrosmog filter” that shields the high-impedance transducer parts from extraneous interference.



9. TRUMPET/TROMBONE

Use a cardioid microphone, aiming it **slightly off-center**, at the **rim of the bell**. The sound you will get depends on the working distance. When **close miking** the trumpet from 2 to 12 inches (5 to 30 cm), we recommend to **blow to one side of the microphone**. Certain blowing techniques may cause eddies at the microphone. **Using a windscreens** can cut back the resulting noise. Be sure to switch the **preattenuation pad** in because both the trumpet and the trombone are capable of producing **extremely high sound pressure levels** up to 130 dB SPL. Seasoned recording engineers often use **tube microphones** such as the AKG SolidTube or AKG C 12VR to mic these instruments.





C 1000 S

THE SWISS ARMY KNIFE FOR MUSICIANS

- **Selectable cardioid or hypercardioid polar patterns**
- **9V battery or phantom powering**
- **Suited for vocal and instrument miking**
- **Complete with Presence Boost Adapter for extended high-end**

The immensely popular C 1000 S has become a standard item on the equipment list of many musicians and has lived up to its glorious reputation. The C 1000 S is a rehearsal room standard for vocals, hi-hats and instruments rich in overtones such as snare drums, string instruments, and for drum overhead miking. If no phantom power is available the microphone can be powered with a standard 9V battery. The **Presence Boost Adapter** adds high-end enhancement if needed to restore brilliance and add life to dull sounding instruments, or vocals.

"... even with a 'blind' test, without Derek knowing which vocal track was in the mix, he always chose the basic C 1000 S delivery."

**Mike Skeet
AUDIO MEDIA**

AUDIOMEDIA

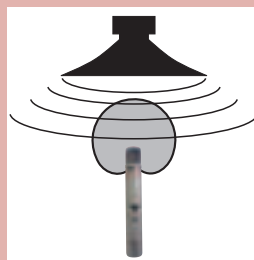
"... a very high-quality microphone, which truly deserves to be put in the category 'recommended' ..."

**Heinz Kaufmann
WORKSHOP**



Extended Frequency Response

Owing to the specific vibrational behavior of their much lighter diaphragms, condenser microphones provide a wider high-frequency response than dynamic microphones. Due to its low mass, a condenser diaphragm can respond more easily and accurately. The result is highly accurate transient response and a more natural sound. This property is particularly beneficial in miking sound sources rich in overtones.



Feedback: As soon as the microphone picks up its own amplified signal from the loudspeaker, the sound system starts howling. To stop the feedback, the microphone needs to be pointed away from the loudspeaker(s).



10. GRAND/UPRIGHT PIANO

Grand Piano

Use two cardioid large-diaphragm microphones placed approximately 8 to 16 inches (20 to 40 cm) above the strings. Direct one mic at the treble range and the other at the bass range. Align both microphones with a point about 6 inches (15 cm) behind the dampers. Alternatively, you can mic the bass range from the rear end of the grand for a rounder bass sound.

Upright Piano

Mic the upright piano in the same way as the grand. If the front cover is closed, let the mics look into the instrument from above. Removing the front cover provides a more airy sound.



PLAYBACK & MONITORING

Making studio microphones is not the only thing that made AKG famous as a leading audio manufacturer.

Top recording studios have appreciated the superior quality of AKG studio headphones for decades. Did you know that as early as 1980 virtually every US studio used at least one pair of AKG headphones?

HEARO 999 AUDIOSPHERE

NEW!



HEARO 999 AUDIOSPHERE: Space-age Surround Sound

Completely digital, top quality surround sound system. **AKG IVA processor** for natural spatial sound. Digital radio transmission for zero noise. An **integrated Dolby Digital* decoder** eliminates the need for an outboard decoder. Selectable room simulations, dynamic range, ear matching curves and timbre presets make the **HEARO 999 AUDIOSPHERE** a versatile high-end monitor system.

Recording Applications

Recording, mixdown, playback and audio source monitoring. In the studio, at home, on location, in the morning or in the middle of the night, the **HEARO 999 AUDIOSPHERE** is the ideal portable monitor system.

Home Audio/Video System

DVD enthusiasts will be impressed. **Dolby Digital*** and **AKG IVA processing** will place you in the middle of the action. Enjoy the magic of surround!



K 141 Monitor
The Monitoring Headphones



The most used headphones in US studios (source: Billboard). Semiopen design. *)

K 240 Monitor
Classic Hi-Fi Headphones



Dynamic wideband diaphragms for highly detailed sound. Semiopen design. *)

K 240 DF Studio Monitor
Broadcast Reference Headphones



Semiopen design that strictly conforms to the IRT (German Institute for Radio Technology) standard.

K 270 Studio
The Studio Headphones



Closed-back studio headphones with "acoustic lens" parabolic speaker arrays and automatic muting feature.

*) Also available as K 141 Studio / K 240 Studio with plug-on cable, patented Varimotion Technology and lower impedance (55 ohms).



11. DRUMS

Miking a drum kit is all about knowledge and experience. Getting good results is hard work. As a **minimum microphone setup** we recommend to position **two cardioid condenser microphones** such as AKG C 414B-ULS 32 to 48 inches (80 to 120 cm) above the drummer's head. If your budget permits, you can use this **overhead pair for the cymbals only**, cutting frequencies below 1 kHz on the EQ, and mic up the **various drums individually** as follows:

Hanging and floor toms: Place the microphones very close to the perimeter of the head.





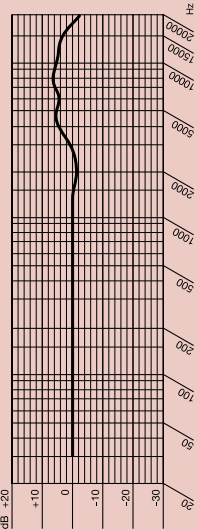
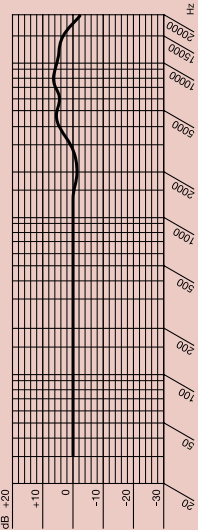
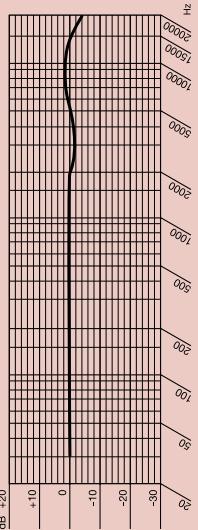
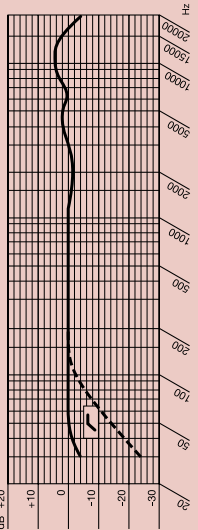
Snare: Place the microphone extremely close-in, 1.2 to 2 inches (3 to 5 cm) above the top head. You may perhaps use an extra microphone directed at the snares from below, making sure to reverse its polarity.

Hi-hat: Use a hypercardioid small-diaphragm microphone pointing away from the snare drum.

Bass drum: Make sure to switch the preattenuation pad in (sound pressure levels may be as high as 160 dB SPL). Remove the front head and place the microphone inside the shell. The further you place the mic away from the rear head, the fatter the sound will be. Directing the microphone exactly at the point where the beater strikes the head may be less desirable as this will produce a dry click with virtually no bass content.





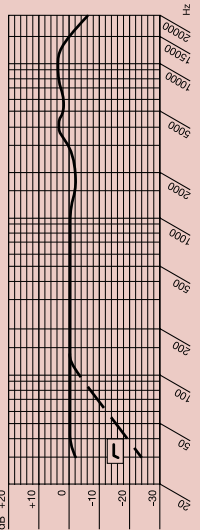
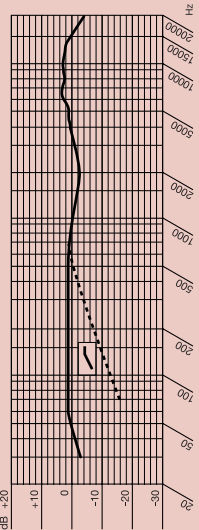
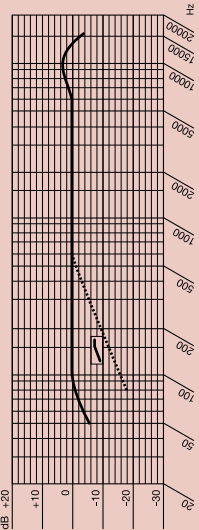
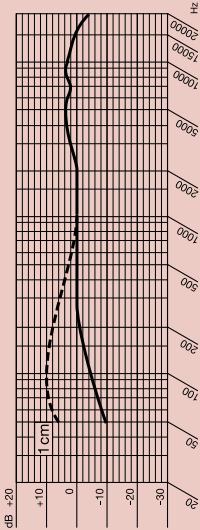
SPECIFI

CLASSIC RECORDING MICROPHONES

	C 12VR	C 414B-TL II	C 414B-ULS	SolidTube
				
Frequency Range (Hz)	30 - 20,000	20 - 20,000	20 - 20,000	20 - 20,000
Sensitivity (mV / Pa)	10 (-40 dBV)	12.5 (-38 dBV)	12.5 (-38 dBV)	20 (-34 dBV)
Equivalent Noise Level (dB-A)	22	14	14	20
S/N Ratio (dB)	72	80	80	74
Max. SPL (dB SPL)	128 / 138 / 148	140 / 150 / 160	140 / 150 / 160	130 / 145
Pad (dB)	-10 / -20	-10 / -20	-10 / -20	-20
Bass Cut Filter (dB / octave)	6 / 12 at 120 Hz	12 at 75 / 150 Hz	12 at 75 / 150 Hz	12 at 100 Hz
Impedance (ohms)	200	180	180	200
Powering	via PSU	9 - 52 V Phantom	9 - 52 V Phantom	via PSU
Size (mm)	42 ø x 225	141 x 45 x 35	141 x 45 x 35	63.5 / 57 ø x 219
(inch)	1.7 ø x 8.9	5.6 x 1.8 x 1.4	5.6 x 1.8 x 1.4	2.5 / 2.2 ø x 8.6
Net Weight (g / oz)	680 / 24.0	320 / 11.3	320 / 11.3	920 / 32.5
Shipping Weight (kg / lbs)	4.5 / 9.9	.92 / 2.0	.92 / 2.0	5.0 / 11.0
Standard Accessories	N 12 VR H 15/T MK-Tube W 42	H 100 W 414	H 100 W 414	N-Solid H-Solid MK-Solid W-Solid
Frequency Response Graph				
Diaphragm size (Ø)	25 mm / 1"	25 mm / 1"	25 mm / 1"	25 mm / 1"
Polar response	Cardioid, omnidirectional, figure-eight and 6 intermediate steps	Cardioid, omnidirectional, hypercardioid and figure-eight	Cardioid, omnidirectional, hypercardioid and figure-eight	Cardioid only
Self noise	low	very low	very low	low
Preamp	tube	solid-state	solid-state	tube
Output stage	transformer	transformerless	transformer	transformer

CATIONS

PROJECT STUDIO LINE

C 4000 B	C 3000 B	C 2000 B	C 1000 S	
				
20 - 20,000	20 - 20,000	30 - 20,000	50 - 20,000	Frequency Range (Hz)
25 (-32 dBV)	25 (-32 dBV)	20 (-34 dBV)	6 (-45 dBV)	Sensitivity (mV / Pa)
8	14	20	20	Equivalent Noise Level (dB-A)
86	80	74	74	S/N Ratio (dB)
145 / 155	140 / 150	140 / 150	137	Max. SPL (dB SPL)
-10	-10	-10	-	Pad (dB)
12 at 100 Hz	6 below 500 Hz	6 below 500 Hz	-	Bass Cut Filter (dB / octave)
200	200	200	200	Impedance (ohms)
9 - 52 V Phantom	9 - 52 V Phantom	9 - 52 V Phantom	9 - 52 V Phantom or 9 V battery	Powering
58 ø x 183 2.3 ø x 7.2	53 ø x 162 2.1 ø x 6.4	53 ø x 159 2.1 ø x 6.3	43 ø x 220 1.7 ø x 8.7	Size (mm) (inch)
450 / 15.9 1.0 / 2.2	400 / 14.1 1.0 / 2.2	325 / 11.5 .95 / 2.1	250 / 8.8 .86 / 1.9	Net Weight (g / oz) Shipping Weight (kg / lbs)
H 100 W 4000	H 100	H 100	PB 1000 PPC 1000 SA 43 W 1000	Standard Accessories
				Frequency Response Graph
25 mm / 1"	25 mm / 1"	13 mm / 1/2"	13 mm / 1/2"	Diaphragm size (Ø)
Cardioid, omnidirectional and hypercardioid	Cardioid only	Cardioid only	Cardioid and hypercardioid	Polar response
extremely low	very low	low	low	Self noise
solid-state	solid-state	solid-state	solid-state	Preamp
transformerless	transformerless	transformerless	transformerless	Output stage

CLASSIC RECORDING MICS

C 12 VR



Vintage C 12 tube microphones are much sought after and hardly affordable. The VR version is a faithful replica from the transducer to the tube, updated to the current state of the art. The C 12 VR provides nine (!) selectable polar patterns and an inimitably clear, airy, and warm sound. Standard accessories include a remote control, spider type shock mount, and pop screen in an aluminum carrying case. A sound investment!

C 414 B-ULS & -TL II



Probably the most well-known studio condenser microphone in the world with four selectable polar patterns. ULS version for instrument recording, TL II version for vocals. Complete with pop screen and spider type shock mount.



THE PROJECT STUDIO LINE

SOLID TUBE



This vacuum tube studio microphone with large-diaphragm transducer provides an extremely natural and warm sound that gives digital recordings the required warmth. Complete with spider type shock mount, pop screen, and carrying case.



C 4000 B



Exceptionally versatile large-diaphragm microphone with selectable omni, cardioid, and hypercardioid polar patterns. Superior price/performance. Complete with pop screen and spider type shock mount.

C 3000 B



Highly affordable 1-inch large-diaphragm microphone with a versatile cardioid polar pattern for vocal and instrument miking, providing the classic "silky" AKG sound. Spider type shock mount included.

C 2000 B



Optimum entry-level small-diaphragm recording microphone featuring high sensitivity, low self noise, and a cardioid polar pattern for unique flexibility. Complete with spider type shock mount.

C 1000 S



A long-time best-selling small-diaphragm microphone with selectable polar patterns (cardioid and hypercardioid), for battery or phantom powering. With Presence Boost Adapter and pop screen.

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