C-450 System
Modular Condenser Microphones

Like quality cameras with interchangeable lenses, AKG design engineers have similarly developed a complete modular microphone system...with "quick-change" screw-on capsules and accessories of varied characteristics...thereby providing an almost limitless variety of combinations which expand the flexibility and capabilities of the microphone as different applications arise.

Commencing with an option of three different types of preamplifiers, six different types of transducer capsules are available together with a variety of swivels, pre-attenuator pads, extension tubes, windscreens, shock mounts and stand adapters—in a choice of either matte nickel or satin-black chrome finish and 12 or 48 volt phantom powering from associated equipment, in-line ac or battery power supplies. Truly, a complete *all-purpose* microphone system.

Four complete microphone combinations (see below) are available pre-packaged for your convenience. All components are, of course, also available separately; simply add optional modules as your requirements grow.

Complete Microphone Combinations

Note: The specific preamplifier modules, transducer capsules and power supplies used in the following combinations are covered in more detail in their individual descriptions.



C-451E Basic Cardioid Combination

The essential microphone. Its flat, wide-range response and highly uniform cardioid directional pattern make it the single most useful microphone for the widest possible range of music and speech applications—whether in recording, broadcasting or sound reinforcement. Preamplifier and transducer capsule finished in matte nickel. Complete microphone including C-451E basic 12-volt preamplifier, mating CK-1 cardioid capsule*, SA-15/1 stand adapter, W-3 windscreen and foam-lined vinyl case.

C-452EB Basic Cardioid Combination

Similar to C-451E Combination but for 48V phantom powering systems. Includes C-452EB 48V preamplifier with bass-rolloff switch, CK-1 cardioid capsule*, SA-15/1 stand adapter, W-3 windscreen and foam lined vinyl case.

*Each capsule is supplied with individual proof-of-performance frequency-response curve.



1. W-19 foam windscreen
2. CK-9 shotgun capsule
3. MCH-20 microphone cable
4. SA-18/3 stand adaptor**
5. SA-15/1 stand adaptor**
6. SA-70/3 stand adaptor
7. W-3 foam windscreen**
8. H-70 suspension shockmount**
9. H-7 pistol grip
10. CK-1 black cardiod capsule**
11. C-451EB black preamplifier
12. B-46E battery power supply
13. Foam lined carrying case (see pg. 18)

**Not supplied with Basic Shotgun Combination

C-451EB/CK-9 Black Basic Shotgun Combination

A "must" for film and videotape dialog recording, remote newsgathering and theatrical sound reinforcement—acoustically difficult applications in which the microphone's extreme directionality and consequent ability to work at greater distances than a standard cardioid can spell the difference between clean or noise-ridden speech reproduction. Both the preamplifier and transducer capsule are finished in black for minimum reflectivity. Complete microphone including C-451EB-Black 12-volt preamplifier with bass-rolloff facilities, mating CK-9 shotgun capsule*, B-46E battery power supply, SA-70/3 pistol-grip and boom-suspension adapter, H-7 pistol grip, W-19 foam windscreen, MCH-20 heavy-duty 20′ cable assembly and fitted, foam-lined carrying case.

C-451EB/CK-1/CK-9 Black Dual-Purpose Cardioid/Shotgun Combination

Virtually a "mini-system" in itself, this microphone combination includes *two* interchangeable transducer capsules—thus offering the fidelity and universality of a high-quality cardioid plus the added directionality and working distance of a shotgun. The preamplifier and both transducer capsules are finished in black for minimum reflectivity. Complete convertible microphone including C-451EB-Black 12 volt preamplifier with bass-rolloff facilities, CK-1-Black cardioid capsule and CK-9 shotgun capsule*, B-46E battery power supply, SA-15/1 stand adapter (for use when cardioid capsule is employed), SA-18/3 stand adapter, W-3 and W-19 foam windscreens, SA-70/3 pistol-grip and boom suspension adapter, H-7 pistol grip, H-70 boom-suspension shock mount (all for use when shotgun capsule is employed), MCH-20 heavy-duty 20′ cable assembly and fitted, foam-lined carrying case.

*Each capsule is supplied with individual proof-of-performance frequency-response curve.

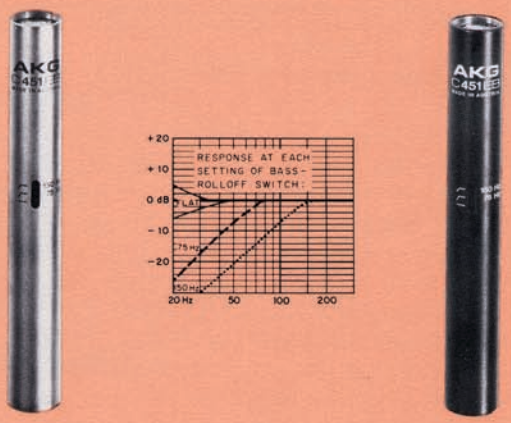
Preamplifier Modules for the C-450 System



C-451E

C-451E: Basic 12-volt preamplifier. Mates with any transducer capsule in the C-450 system to make up a complete condenser microphone terminating in a 3-pin XLR-type connector. (In addition to its electrical functions, the preamplifier forms the body or shaft of the microphone.) Employs combined FET/bipolar circuitry to provide the required dc polarizing voltage and audio preamplification/impedance conversion for the mating capsule. Features extremely flat, wide-range response and high overload margin. Provides low-impedance balanced output and operates on 12-volt (nominal) phantom powering. Complete with foam-lined vinyl case.

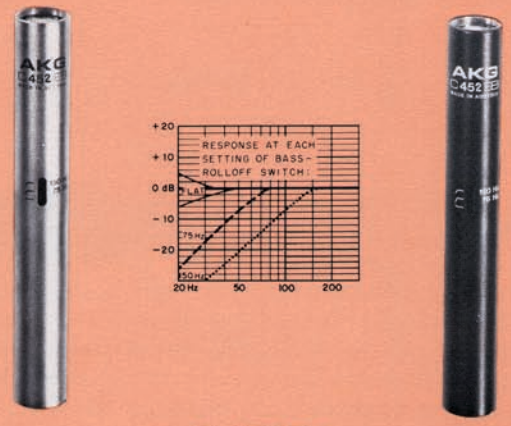
Frequency Range: 5-30,000 Hz
Acceptable Phantom-Power Source: 9-52 volts dc (via suitable voltage-dropping network)
Finish: Nickel-plated brass
Overall Dimensions: 4¾" long x ¾" dia.
Net Weight: 2½ oz.



C-451EB

C-451EB, C-451EB Black: 12-volt preamplifiers with built-in bass-rolloff facilities. Same functions, performance characteristics and phantom-power requirements as C-451E, but with the addition of a 3-position 14-dB/octave bass-rolloff switch and network (flat, 75-Hz hinge point, 150-Hz hinge point) to control low-frequency program content and noise. Each complete with foam-lined vinyl case.

Frequency Range: 5-30,000 Hz
Acceptable Phantom-Power Source: 9-52 volts dc (via suitable voltage-dropping network)
Finish: C-451EB: Nickel-plated brass
C-451EB Black: Black-chrome-plated brass
Overall Dimensions: 5⅜" long x ¾" dia.
Net Weight: 3 oz.



C-452EB

C-452EB, C-452EB Black: 48-volt preamplifiers with built-in bass-rolloff facilities. Same functions, performance characteristics and size as C-451EB and C-451EB Black, but intended for use only with existing 48-volt (nominal) phantom-power installations. Provide a quick, simple way to make all C-450 system microphone combinations compatible with such installations. Each complete with foam-lined vinyl case.

Frequency Range: 5-30,000 Hz
Acceptable Phantom-Power Source: 48 volts dc, ≈3mA
Finish: C-452EB: Nickel-plated brass
C-452EB Black: Black-chrome-plated brass
Overall Dimensions: 5⅜" long x ¾" dia.
Net Weight: 3 oz.

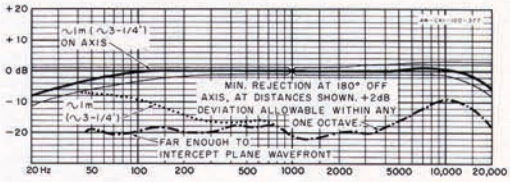
Transducer Capsules for the C-450 Modular System

Transducer Type: Condenser
Directional Characteristic:
Cardioid
Sensitivity:
−39.5 dBm (EIA G_m: −132 dBm)
Finish:
CK-1: Nickel-plated brass
CK-1 Black: Black-chrome-plated brass
Overall Dimensions:
1⅛″ long x ¾″ dia.
Net Weight: 1 oz.



CK-1

CK-1, CK-1 Black: Basic cardioid condenser capsules. For all applications in recording, broadcasting and sound-reinforcement requiring flat, wide-range on-axis response and linear off-axis response. Each capsule also features high front-to-rear discrimination over a wide range of frequencies. Both mate with any C-450 system preamplifier, and are supplied complete with an individual proof-of-performance frequency-response curve and foam-lined vinyl case.

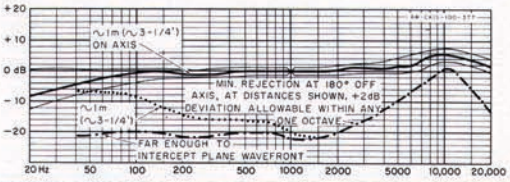


Transducer Type: Condenser
Directional Characteristic:
Cardioid
Sensitivity:
−39.5 dBm (EIA G_m: −132 dBm)
Finish: Nickel-plated brass
Overall Dimensions:
1⅛″ long x ¾″ dia.
Net Weight: 1 oz.



CK-1S

CK-1S: Cardioid condenser capsule with rising response. Similar to CK-1 and CK-1 Black capsules, but with on-axis rising response between 2 kHz and 10 kHz. Extremely useful for imparting added "presence" and "brilliance" at normal working distances, or for preserving clarity at greater working distances. Mates with any C-450 system preamplifier. Complete with individual proof-of-performance frequency-response curve and foam-lined vinyl case.

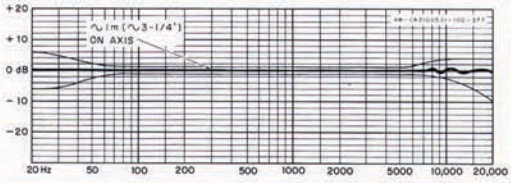


Transducer Type: Condenser
Directional Characteristic:
Omnidirectional
Sensitivity:
−41 dBm (EIA G_m: −133.5 dBm)
Finish:
CK-2: Nickel-plated brass
CK-2 Black: Black-chrome-plated brass
Overall Dimensions:
1⅛″ long x ¾″ dia.
Net Weight: 1 oz.



CK-2

CK-2, CK-2 Black: Omnidirectional condenser capsules. Recommended for recording and broadcast applications that require extra emphasis on the acoustic ambience of a hall or auditorium, highly faithful reproduction of deep-bass fundamentals and high-treble overtones in music, non-discriminating coverage of several instrumentalists and vocalists grouped around a single microphone or close-up mic'ing free of proximity effect. Each capsule features extraordinarily flat and extended on-axis response coupled with uniform non-directional pickup. Both mate with any C-450 system preamplifier and are supplied complete with an individual proof-of-performance frequency-response curve and foam-lined vinyl case.



Transducer Type: Condenser
Directional Characteristic:
Cardioid
Sensitivity:
−39.5 dBm (EIA G_m: −132 dBm)
Finish: Black steel-wire mesh
Overall Dimensions:
3⅛″ long x 1 15/16″ dia.
Net Weight: 4 oz.



CK-5

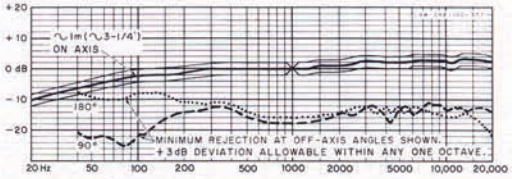
CK-5: Shock-mounted cardioid condenser capsule with fixed wiremesh windscreen. Ideal for pop and rock vocalists, stand-up comics, emcees and remote-newsgathering reporters. Its highly effective internal shock suspension and windscreen/pop filter make this capsule perfect for handheld and outdoor use. Response and directional characteristics similar to those of the CK-1 capsule. Mates with any C-450 System preamplifier. Complete with individual proof-of-performance frequency-response curve and foam-lined vinyl case.



CK-8

Transducer Type: Condenser
Directional Characteristic:
Short-shotgun hypercardioid
Sensitivity:
−35.5 dBm (EIA G_m: −128 dBm)
Finish: Black-lacquered brass
Overall Dimensions:
$8\frac{5}{16}$" long x $\frac{3}{4}$" dia.
Net Weight: $1\frac{1}{2}$ oz.

CK-8: Short-shotgun condenser capsule. Designed primarily for effective *medium*-distance dialogue pickup in film and television work (where it can be kept out of camera range on a boom or fishpole), this capsule can also be used at *closer* distances (hand-held or stand-mounted) in unusually noisy or feedback-prone locations. Its tight hypercardioid directional pattern and unusually high sensitivity permit the capsule to be used at 1.5-2 times the working distance of a standard cardioid for roughly the same source-to-noise ratios and output levels. Mates with any C-450 system preamplifier. Complete with individual proof-of-performance frequency-response curve, W-18 windscreen and foam-lined vinyl case.

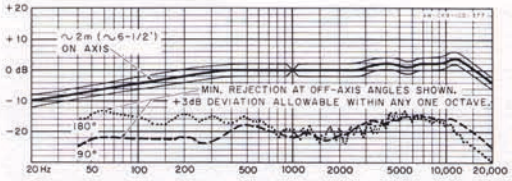




CK-9

Transducer Type: Condenser
Directional Characteristic:
Shotgun Hypercardioid
Sensitivity: −35.5 dBm (EIA G_m: −128 dBm)
Finish: Black-lacquered brass
w/nickel-plated grille
Overall Dimensions:
24" long x $\frac{15}{16}$" dia.
Net Weight: 12 oz.

CK-9: Shotgun condenser capsule. "Big brother" to the CK-8 and, with its longer acoustic-interference tube and more directional polar pattern, designed for even greater working distance in difficult applications—dialog pickup in film and television, remote newsgathering and theatrical sound reinforcement. The CK-9 can be used at 3-4 times the working distance of a standard cardioid for similar source-to-noise ratios and output levels. Mates with any C-450 system preamplifier. Complete with individual proof-of-performance frequency-response curve and zippered vinyl case with protective foam packing.





ZW-8/SM-8



ZW-9/SM-9

Zeppelin-Windscreen/Shock-Suspension Combinations for C-450 System Shotgun Microphones

ZW-8/SM-8: Combination for CK-8 short-shotgun capsule with any C-450 System preamplifier.

ZW-9/SM-9: Combination for CK-9 shotgun capsule with any C-450 System preamplifier.

Featuring a three-layer diffusion screen coupled with a rubber-damped double-cantilever suspension, these new windscreen/shock-mount combinations offer almost *total* elimination of wind noise and vibration. Each lightweight combination includes an adjustable pistol-grip handle with $\frac{3}{8}$" *and* $\frac{5}{16}$" threaded inserts, permitting it to be used either hand-held or boom-mounted. Where environmental conditions permit, either shock-mount may be used without its windscreen.

Special-Purpose Modules—for the C-450 System



A-50/10 **A-50/20 Black**

A-50/10, A-50/10 Black, A-50/20, A-50/20 Black: 10-dB and 20-dB capacitive pre-attenuator pads. These pads prevent capsules from overdriving preamplifiers at extremely high sound-pressure levels *without affecting frequency response.* Pads insert directly between any preamplifier and any capsule (except CK-9 shotgun), and may be used singly, in multiples and in various combinations with A-51 swivel joints and/or VR-1 or VR-2 extension tubes. 10-dB pads have their value color-engraved in red and 20-dB pads have their value color-engraved in green for ease of identification. Each pad complete with screw-top plastic protective case.

Approximate Insertion Loss:
A-50/10: one = 10.7 dB, two = 15 dB, three = 18.2 dB, four = 20.7 dB
A-50/20: one = 19.3 dB, two = 24.9 dB, three = 28.2 dB, four = 31.7 dB
Mixed: one A-50/10 + one A-50/20 = 22 dB

Finish:
A-50/10, A-50/20: Nickel-plated brass
A-50/10 Black, A-50/20 Black: Black-chrome-plated brass

Overall Dimensions: $1\frac{1}{16}$" long x $1\frac{1}{16}$" dia.
Net Weight: $\frac{1}{2}$ oz.



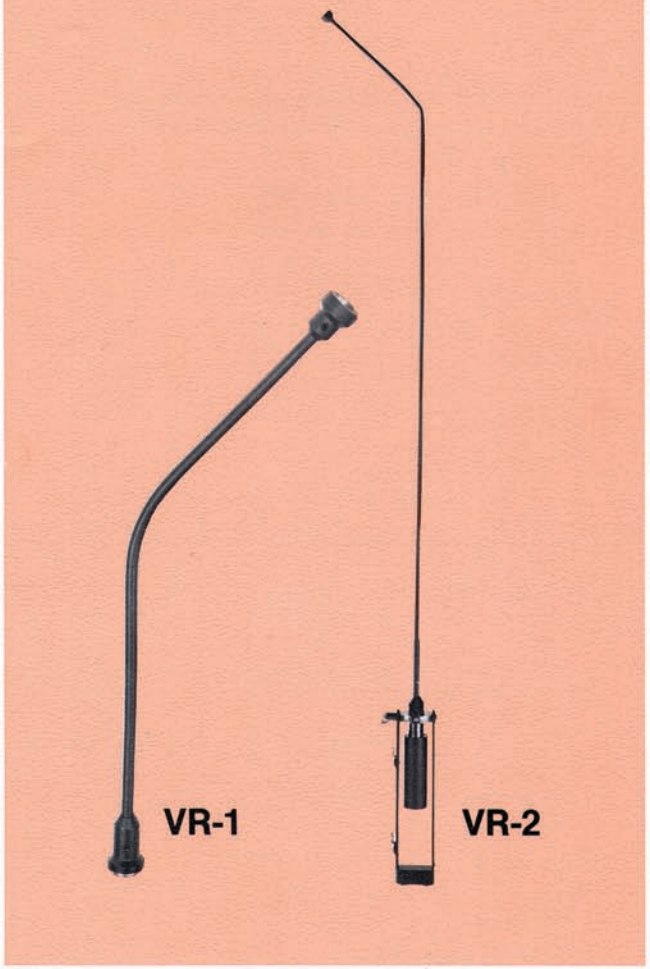
A-51 **A-51 Black**

A-51, A-51 Black: 180-degree swivel joints. For angling axis of any capsule (except CK-9 shotgun) with respect to axis of any preamplifier over a range of 180 degrees. (Especially useful for X-Y stereophony with two preamplifier-capsule combinations on a common stereo bar.) Swivels insert directly between preamplifier and capsule, and may be used either alone or in various combinations with A-50 pre-attenuators and/or VR-1 or VR-2 extension tubes.

Insertion Loss: None

Finish:
A-51: Nickel-plated brass
A-51 Black: Black-chrome-plated brass

Overall Dimensions: $1\frac{5}{8}$" long x $1\frac{1}{16}$" dia.
Net Weight: $1\frac{3}{4}$ oz.



VR-1 **VR-2**

VR-1, VR-2: Short and long angled extension tubes. Used for creating longer, more slender and less obtrusive microphones. Both tubes insert directly between any preamplifier and any capsule (except CK-9 shotgun), and may be used either alone or in various combinations with A-50 attenuators and/or A-51 swivel joints. The VR-1 is ideal for lectern applications or for extending a capsule outward a short distance from a standard floor stand. The longer VR-2 features a swivel mount and counterweight, and may be used floor standing (on the optional ST-305 anti-shock base) or suspended from above the performer. Both tubes angled at approximately 45 degrees.

Insertion Loss: None

Finish: Black-lacquered brass

Overall Dimensions:
VR-1: $11\frac{5}{8}$" long x $\frac{1}{4}$" tube dia. x $1\frac{1}{16}$" fitting dia.
VR-2: $51\frac{1}{4}$" long x $\frac{1}{4}$" tube dia.

Net Weight:
VR-1: 2 oz.
VR-2: $4\frac{3}{4}$ lbs.

Additional general accessories for all C-450 System components—e.g. standard windscreens, stand adapters, shock mounts, goosenecks and table stands—are listed in the Accessories section of this catalog, and in supplement.