Section 1

Wired Microphones

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INTRODUCTION TO

SELECTING A MICROPHONE—THE BASICS

Dynamic or Condenser?

One of the first things that you need to know before purchasing is whether you need a dynamic or condenser microphone. Inside each and every microphone is a transducer. This is the component which captures sound by changing one form of energy into another. In this process acoustic energy is transformed into electrical energy. Mic transducers utilize either dynamic or condenser transducer elements.

Dynamic Microphones:

These fall into two main groups, ribbon and moving coil. All dynamic microphones utilize the more rugged moving coil principle. This is like a loudspeaker in reverse: a coil of wire connected to the microphone diaphragm is held in a magnetic field. Sound waves change the pressure of the air they travel through. This causes the diaphragm to vibrate, thus, the coil moves in the magnetic field and an audio frequency voltage is induced. This signal is balanced, grounded and of low resistance and can be connected directly to the microphone input of a tape recorder or mixing console without any electronics or supply voltage being needed in the microphone. Moving coil mics are extremely rugged and reliable. Consequently, they can be used in difficult working situations where more fragile microphones would not be suitable. The main uses are in broadcast reporting situations and in live stage work.

Condenser and Electret Condenser Microphones:

The condenser transducer is made up of two plates in a capacitor arrangement. The front plate is the diaphragm and responds to acoustic pressure changes. The back plate is fixed. An electrical charge is applied to either the front diaphragm or back plate depending on the design. As acoustic pressure moves the diaphragm, the capacitance changes between the plates and a voltage proportional to the acoustic signal is produced. The electrodes used in electret (pre-polarized) condensers are manufactured from a special synthetic material. This material has a unique quality, being able to permanently store an electric charge; the charge is thus ‘frozen’ in the electret material. No external polarizing voltage is required for the capsule and a low voltage power source can power the remainder of the mic’s circuitry. In contrast to dynamic mic, electret condenser mics can be very compact. This makes it possible to design ultra-small clip-on lavalier mics, and small modular capsules. Back-electret condenser mics use 48v phantom power (P 48) for external power.

Pros:
- More sensitive
- Better transients and frequency response
- Useful small or large diaphragms
- Multiple patterns in one housing

Cons:
- Higher self-noise
- More fragile, more expensive
- Require power source
- Prone to weather/RF interference

Condensers

Polar Patterns:

One of the goals in microphone design is to make the transducer element more sensitive to sounds coming from a certain direction. Its directionality plays a key role the application it will be selected for — whether it’s capturing live vocals or a kick drum. A polar pattern illustrates this directionality by showing the general sensitivity of a microphone from different directions using a 1 kHz (kilohertz) test tone. This is sometimes referred to as “Rejection @ 1 kHz.” There are 5 common polar patterns: Omni-directional, Bi-directional or Figure-8, Cardioid, Super Cardioid and Lobar.

<table>
<thead>
<tr>
<th>Polar Pattern</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omni-directional</td>
<td>360°</td>
</tr>
<tr>
<td>Bi-directional</td>
<td>Coverage from front and rear of capsule</td>
</tr>
<tr>
<td>Cardioid</td>
<td>180° no sound from rear</td>
</tr>
<tr>
<td>Super Cardioid</td>
<td>160° slight pick-up from the rear</td>
</tr>
<tr>
<td>Lobar</td>
<td>140° off-axis sound highly attenuated</td>
</tr>
</tbody>
</table>

As you look at the representation of a microphone’s polar pattern you can see its ability to reject sounds from a given direction. The area where a mic completely rejects sound is its “null” point. A cardioid mic has a null point that is directly to the rear of the mic. A super-cardioid mic or lobar mic has null points at its rear sides. Knowledge of a microphone’s null point is paramount for proper mic placement relative to loudspeaker arrays and other microphones.

Polar Response Graphs:

Polar response charts, like those shown at right, illustrate a mic’s pickup pattern at various frequencies. By comparing the size and shape of the various frequency plots, you can get a good sense of a mic’s off-axis response or, how the mic discriminates frequencies hitting its capsule from different angles. The graph is drawn as if the mic capsule was positioned in the center of the graph facing 0 degrees. To make polar plots less cluttered, only one side of each frequency plot is shown even though its pattern is symmetrical. Generally, directional mics become more omni-directional at lower frequencies. This is because higher frequencies have shorter wavelengths than lower frequencies and are easier to control in terms of their directivity.
Frequency Response Graphs:
Polar response graphs are often accompanied by frequency response graphs, which illustrate output levels of the microphone over its operating range from lowest to highest frequency. The limits of human hearing are contained within the frequency spectrum from 20 Hertz (cycles per second) to 20,000 Hertz. As you look at the graph notice that these are shown from left to right along the bottom. The vertical figure on the left can either be a measurement of the relative response in decibels (dB) [see MKH 40 Graph below]. In this scale, a 3 dB increase or decrease is considered to be noticeable to most individuals and a 10 dB change is considered to be twice as soft or twice as loud as the original sound. Other graphs will use a dBV scale as a means of expressing the output voltage of a microphone at different frequencies [see M D 421 II Graph below]. The flat response of the MKH 40 will have a more neutral character and is suitable for a wide range of applications. The peaked response of the MD 421 II in contrast shows a mic with a “presence peak” beginning at around 2 kHz to add emphasis to upper mid-range frequencies and increase vocal intelligibility. Also, certain mics feature bass roll-off switches which attenuate low-end rumble without altering the general character of the microphone. These roll-off effects will also be illustrated on the graph by dashed lines.

Sensitivity:
The rating of a microphone’s output voltage for a particular SPL input. Sennheiser mics are subjected to 1 kHz sine wave at a level of 1 Pascal which is the same as saying 94 dB SPL. The resulting output voltage of the microphone is given in millivolts and expressed as “1.8 mV/Pa” for example. This provides a means of comparison between microphones.

Maximum SPL:
A measure of how much Sound Pressure Level (SPL) the microphone can tolerate before distortion. A 1 kHz tone is presented to the mic and the maximum output prior to distortion is measured. The spec sometimes written as a two-part figure, for example “140 dB SPL, 1 kHz @ 0.5% T.H.D.”

Impedance (Nominal):
The lower the better. You want an impedance of at least five times lower than that of the console you’re connecting the microphone to. The term “nominal” refers to an average since impedance changes slightly over the frequency range. A lower impedance value also means you can run a longer cable without loss of signal integrity.

Microphone Setup and Miking Techniques
3-to-1:
Whenever multiple mics are used in a stage setup, the 3-to-1 rule may be employed to minimize phase cancellation. The rule states that the distance between mics must be three times the distance from each microphone and it’s sound source. The sound picked up by the more distant mic will be at least 12db less than the sound picked up by the closer mic. Generally, the 3-to-1 rule is based on use with omni-directional mics it can be relaxed to some extent for unidirectional mic use.

Stereo Mic Techniques:
Stereo miking refers to a number of miking setups where we position and aim usually two microphones to capture left-to-right soundscapes of one or more sound sources. The auditory nerves inside our ears can detect phase and amplitude differences from played back sounds recorded in stereo. This allows us to localize sounds that are wider, spacious and more pronounced in the mix. Stereo miking is sometimes used when the size of an ensemble makes close-miking impractical.

There are four common miking arrangements for stereo recording: XY or Coincident Pair, Near Coincident Pair, Spaced Pair and MS (mid-side):

XY or Coincident Pair: XY miking uses two directional or cardioid mics angled between 90 and 135° apart and placed as close together as possible. Sound hits both mic capsules at the same time, hence the term coincident to describe the technique. However, sounds to the left or right of center hit one mic on-axis and one mic off-axis resulting in an audible level discrepancy between both capsules, creating a stereo image.

Near Coincident Pair: The only difference between XY and Near Coincident Pair stereo miking is the introduction of space between both mic capsules. This effectively creates a time difference and level difference between both receiving capsules. The result is a well-defined stereo image that has more depth and sharpness than a coincident pair. There are several industry references for this type of setup. For instance, French Broadcasting utilize the ORTF technique which specifies angling cardioid mics at 110° with a capsule spacing of approximately 7 inches.

Spaced Pair: This stereo miking arrangement points two mics in the same direction with a large space between them. Only sounds emanating from the direct center arrive at both mics at the same time. Sounds to the left or right of center arrive sooner or later than the other. As a result, time delay cues occur between capsules while no significant amplitude differences occur. Usually, two omni-directional mics are positioned at least two feet from each other or as distant as 10 to 12-ft. from each other. Sometime a very large spacing between two mics produces a sonic hole and a third microphone may be added.

MS (Mid-Side) Pair: Mid-side stereo miking is a specific type of coincident pair miking using one cardioid and one bi-directional mic. This arrangement positions the bi-directional mic at 90° to the sound source while the cardioid is pointed directly at the sound source. This miking technique is more complex because it requires a decoding process for playback. Basically, the bi-directional mics output is split and one side is phase-reversed. Upon playback, the two mic outputs must be panned hard left and hard right. The resulting stereo image has outstanding center stage sharpness and localization accuracy.

Microphone introduction courtesy of Sennheiser USA.
Tapping the sound of a legendary capsule, AKG has created a modern version of the classic microphone. Combining modern design with a classic sound, the C 451 B is the modern interpretation of AKG’s former C451 EB + CK1 modular microphone. Back by popular demand, the C 451 B duplicates the C 451 EB + CK1’s acoustics, while incorporating state-of-the-art electronics in an integrated mechanical design (not a modular one). The result is dramatically improved specifications with outstanding price/performance while the legendary response of the CK1 capsule—including the characteristic slight high-frequency boost—is maintained. At home anywhere from commercial recording facilities to the personal studio and live touring sound, the cardioid C 451 B offers a switchable 10dB/20dB pad and a 12 dB/octave bass low frequency cut filter. Transformerless output ensures a flat uncolored low frequency response and eliminates potential distortion from low frequencies at high SPL’s. Ideal for any application where sounds, particularly their transient content, need to be captured with maximum accuracy, such as overhead miking of drums, percussive instruments, or guitar. The C 451 B’s airy sound, high overload limit of the capsule and electronic circuitry, and improved engineering are a solid foundation for creating another legend.

In the 1960s, US sound engineers regarded big, heavy microphones as the epitome of acoustic quality while their European colleagues demanded much smaller microphones. Large-diaphragm transducers have a characteristic response that is perfectly suited for the natural sound of certain instruments and provides a pleasant, warm sound. However, if a sound is to be captured with maximum accuracy small mics are superior because the vibrations of a small diaphragm are much easier to control. In addition, small mics cause much less turbulence within a sound field.

In 1969 a compromise was reached and the C 451 was launched. The C 451 system (also called the CMS Condenser Modular Series) comprised a preamp and several interchangeable screw-on capsules. It was made until 1993 and then replaced with the AKG Blue Line. However, the specific response of the CK1 capsule has remained in demand until this day.

Microphones That Sound Better

Designing microphones and headphones is both a science and an art. This is a concept well understood at AKG. Over the past 50 years, they have consistently married the two to create some of the truest and most natural-sounding microphones in history. AKG was founded in 1947 in the city of Vienna, Austria, home to some of the finest composers of all time—Beethoven, Mozart, Brahms, Haydn, Schubert, Mahler, Schoenberg and, of course, the Strauss family, to name a few. When it comes to crafting products such as theirs, the critical judgements of a finely trained ear—something Vienna has no shortage of—can make the crucial difference between a good microphone and a legendary one. The recipient of over 1400 patents, AKG’s research and development laboratories are the largest, best-equipped and most productive of their kind in the world. They employ more than 50 engineers in full-time research and development, and provide them with the most advanced tools available for computerized design, testing and performance simulation.
C 1000S Dual Pattern Microphone

A “do-it-all” microphone famous for its flexibility, the C 1000S is a condenser mic designed for assignment on stage or in the studio. By placing the supplied acoustical converter over the end of the mic capsule— its polar pattern can be quickly converted from cardioid to hypercardioid — without affecting its on-axis response. The on-axis response of the C 1000S has a gentle (-6 db/octave) roll-off below 200 Hz which has been tailored for the normal close-in use of cardioid and hypercardioid microphones in studio recording and sound reinforcement applications. The mic also includes an attachable Presence Boost Adapter (PB1000) for increased intelligibility.

- Rugged construction qualifies the C 1000S for demanding road work, yet pristine condenser response and low noise make it ideal for recording in home/project studios.
- High sensitivity, high SPL handling with low distortion (137 dB for 1.0 % THD).
- Extended low and high frequency response is tailored for close proximity to sound sources.
- Presence Boost Adapter (PB1000) can be attached to create an emphasis of the higher frequencies around 5 to 9 kHz by 3 to 5 dB. This not only improves intelligibility but is also advantageous when recording instruments with high frequency content.
- PPC1000 Polar Pattern Converter allows quick change from cardioid to hypercardioid when a more directional pickup pattern is required.
- Versatile, side-address cardioid condenser mic designed for professional and home studio applications or on-stage.
- Cardioid pattern provides an extremely flat on-axis frequency response with a 3 to 4 dB upper high-frequency boost between 8 and 12 kHz that adds clarity, even with ambient miking.
- One-half inch capsule element placed in a large baffle ring gives the C 2000 B more forward directionality at high frequencies.
- An integral bass cut switch provides a gentle 6 dB per octave roll-off below 500 Hz, compensating for the proximity effect (low frequency boost) associated with close miking.
- Added presence at very high frequencies is an asset in many miking situations, especially home recording studios.
- Self-noise floor is 20 dB (A), giving the mic an effective dynamic range of 120 dB.
- High SPL level 140 dB (150 dB with the integral 10 dB pre-attenuation pad engaged).
- Internal wiremesh grills and a massive metal housing protect against unwanted electrostatic interference.
- Includes SA41/1 stand adapter. Optional accessories include the B18E battery supply, and H100 external elastic shock suspension.

C 2000 B Cardioid with Roll-Off and Pad

An affordable high quality recording microphone, the C 2000 B is a small diaphragm condenser that captures the high frequency harmonic detail and true transient nature of the sound source while at the same time offers the higher sensitivity, low noise and extended bass response (flat to 100Hz) of a large diaphragm condenser. Ideal for acoustic instruments and percussion on stage or in the studio, the C 2000 B’s almost ruler-flat response provides a crystal-clear, “up-front” sound. A switchable bass rolloff filter for eliminating proximity effect and a switchable 10dB pre-attenuation pad let you adjust the mic’s response to all recording or live miking situations. Built-in pop screen reduces unwanted noise that may be caused by plosive sounds when you use the mic extremely close-in. Rugged construction, an elegantly styled die-cast metal housing, and silver-gray finish add to the professional level quality of the C 2000 B.

- One-half inch capsule element placed in a large baffle ring gives the C 2000 B more forward directionality at high frequencies.
- An integral bass cut switch provides a gentle 6 dB per octave roll-off below 500 Hz, compensating for the proximity effect (low frequency boost) associated with close miking.
- Added presence at very high frequencies is an asset in many miking situations, especially home recording studios.
- Self-noise floor is 20 dB (A), giving the mic an effective dynamic range of 120 dB.
- High SPL level 140 dB (150 dB with the integral 10 dB pre-attenuation pad engaged).
- Internal wiremesh grills and a massive metal housing protect against unwanted electrostatic interference.
- Includes SA41/1 stand adapter. Optional accessories include the B18E battery supply, and H100 external elastic shock suspension.
C 3000 B Cardioid with Roll-Off and Pad

Combining innovative design and efficient manufacturing, the all-purpose C 3000 B offers premium sound quality and durability for stage and studio—but at a price far below that of a premium studio mic. Ideal for cost-conscious performers and home/project studio owners, the C 3000 B’s capsule design features a gold-sputtered 1” mylar diaphragm to capture the distinctive character and purity of sound that is pure AKG. Sound is smooth, clear and open, with a vibrant presence that projects to the front of a mix. Bass roll-off and pre-attenuation switches let you tailor the mic for stage or studio. An internal suspension supports the capsule assembly, an integrated windscreen allows outdoor use, and a safety flange provides secure connections in hanging applications. Rugged die-cast construction and scratch-resistant silver-gray matte finish make the C 3000 B well suited to the rigors of touring as well.

- Gold-sputtered 1” (25mm) diameter mylar foil offers the warmth and transparency typically found in AKG mics.
- Capsule is internally shock mounted for low handling noise, while an internal foam sheath minimizes breath noise/pop with minimal attenuation of high frequencies.
- Mic is transformerless and accepts phantom power from 9 to 52v DC.
- Tailored for the modern studio, the C3000B has the typical AKG large diaphragm “signature contour,” a slight dip at 2.5 kHz followed by a rise at 5 - 6 kHz and 9 - 11 kHz.
- Very low self noise floor of 14-dB-A and maximum level capability of 140 dB, produces an overall dynamic range of 126 dB. Via the 10 dB pad, mic range can be shifted up to 150 dB for close instrument miking.
- Cardioid pickup pattern is extremely well controlled, providing excellent off-axis rejection across the entire frequency band.
- A bass cut switch provides a gentle 6-dB per octave rolloff below 500 Hz, compensating for proximity effect in vocal recording.
- Supplied with H100 elastic suspension mount. Optional accessories include B18 battery, pop filter, and wind screen.

C 4000 B Multi-Pattern Microphone

Designed for studio use, the multi-pattern (omnidirectional, cardioid, and hypercardioid) C 4000 B condenser mic is equally at home in broadcast operations or on stage for the highest quality vocals. A true 1” large diaphragm premium microphone, the C 4000 B’s capsule has been carefully tuned to preserve the integrity of the source while offering mild compliments in the high frequencies. Open, clear and natural highs coupled with smooth, accurate lows make the C 4000 B an exemplary choice when employed on vocals and on a varying array of string instruments, brass and woodwinds. With all the on-board options the C4000B has the versatility to take on many tasks in commercial, project and personal studios as well as on a stage and in the broadcast studio.

- 1” thick gold-sputtered diaphragms provide extended high frequency performance.
- Transformerless output ensures low frequency accuracy and nearly non-existent self-noise of 8 dB-A.
- Switchable 12-dB/octave low cut filter at 100 Hz removes rumble or excessive proximity effect.
- Maximum SPL is 145 dB and overall dynamic range is an incredible 137dB—enough headroom for all day-to-day recording situations.
- Switchable 10 dB pad extends operating range even more. Use for distortion-free reproduction of extremely high sound pressure levels (up to 155 dB SPL)
- Mic is transformerless and accepts phantom power from 9 to 52v DC.
- Capsule is internally shock mounted for low handling noise, while an integrated windscreen reduces wind and breath noise.
- Includes the H 100 spider-type shock mount and W 4000 windscreen for demanding situations.
1" LARGE DIAPHRAGM CONDENSER MICS

C 4500 B-BC “On Air” Broadcast Microphone
The C 4500 B-BC was developed to meet the demands associated with digital broadcasting. A front-address, large-diaphragm condenser microphone, the C 4500 B-BC is immune to electrostatic and magnetic fields and provides an extremely wide dynamic range and low self-noise. With the ever-increasing number of broadcast stations becoming “digital”—at least with their automatic control facilities—the on-air studios are more and more clustered with control computers. These computers and their associated monitors radiate electro-magnetic RF fields which can be a serious problem for nearby microphones. The C 4500 B-BC solves this problem with an all-metal housing and double screening of all acoustically open sections of the housing. Additional features include internal shock mounting, switchable -20 dB pre-attenuation pad, and a switchable low-frequency roll-off (6 dB/octave below 120 Hz).

- Main axis for sound entry is in the front of the mic. This allows the C 4500 B-BC to be positioned in front of the talent’s mouth without impeding their field of vision
- Multi-layer pop filter between the front grille and the capsule provides excellent suppression of vibrations and pop noise
- 6 dB per octave below 120 Hz bass-cut filter for frequency roll off and additional reduction of proximity effect
- Switchable -20 dB pre-attenuation pad for undistorted reproduction of extremely high sound pressure levels
- Operates on phantom power (9 to 52 v DC)
- Extremely “voice-friendly” acoustics, requires no further processing after the mic
- Supplied with the H 100 spider-type shock mount and W 4000 windscreen for demanding situations

SOLID TUBE ‘Experience the Warmth’
It has been said that the SOLID TUBE is what a modern large diaphragm condenser microphone would look like if the transistor had never been developed. Everything about it is in fact modern, except the use of the ECC 83 (12AX7) vacuum tube. Designed from the ground up as a new expression of the tube philosophy—sound warmth and the generous margin of overload that tube/transformer output stages are known for—only the mic’s power supply makes use of solid state components. Much of the “signature” of large format condenser microphones lies in the geometry that surrounds the diaphragm assembly.
The SOLID TUBE has a large housing/screen assembly which reacts minimally with the capsule, creating a broad +6 dB peak in response only above 10 kHz. Over most of the range the response lies within a window of ±2 dB. Midband pattern rejection at 180° is in excess of 20 dB. The microphone is response tailored for solo vocal and instrumental pickup in the studio, and as such has only a dedicated cardioid pattern.

- Dedicated cardioid pattern with response tailored to solo vocals and instrumentals in the modern studio
- Sensitivity is 20 mV/Pa and maximum SPL is 130 dB.
- Switchable -20 dB pre-attenuation pad for undistorted reproduction of extremely high sound pressure levels (up to 145dB SPL)
- Wide dynamic range of 110 dB in the studio
- Switchable 12-dB/octave low cut filter at 100 Hz removes rumble or excessive proximity effect
- Includes N-SOLID TUBE power supply, all necessary cabling, an isolation shock mount, foam windscreen and a custom aluminum flight case
C-414 B-ULS / C-414 B-TLII

Multi-Pattern Large-Diaphragm Reference Microphones — The Classic Twins

The worldwide studio standard, the C 414 B-ULS delivers flawless performance and uncommon flexibility in the most demanding studio and concert sound applications. The crisp, full-bodied, and naturally open character of the C 414 B-ULS makes it a preferred choice for critical recording or reinforcement of vocals, piano, percussion, and other instruments with delicate transient content. The most ubiquitous studio condenser microphone in the world, the C 414 B-ULS is designed around dual back-to-back large one-inch, gold-sputtered diaphragms for multiple pickup patterns. The four selectable polar patterns (omni-directional, cardioid, hypercardioid, figure-8) precisely tailor response for maximum versatility, while two bass filter settings suppress unwanted low frequencies. Extremely low self-noise (14 dB-A) and high overload points combine for a remarkably wide 126 dB dynamic range. Switchable 10 or 20 dB internal pre-attenuation pads allow use on instruments producing over 150 dB SPL.

Both mics include windscreen, spider suspension, and individually tested frequency response graphs.

The C 414 B-TLII combines legendary C 12 acoustics and the latest generation of transformerless FET electronics. Although similar to the C 414 B-ULS in shape and features, the C 414 B-TL II differs in two important respects. First, the capsule is a faithful sonic recreation of the one used in AKG’s classic C12 tube microphone. Above 3 kHz, the C 414 B-TL II takes on vintage C12 characteristics, while below this point the response is ruler flat. Additionally, AKG’s computer-aided manufacturing techniques assure greater uniformity in response from microphone to microphone (early CK12’s were all slightly different in response, a consequence of individual hand-crafting). Second, the "Vintage TL" incorporates transformerless electronics for extended low-end reproduction with extremely low distortion. The result is a remarkable microphone that exceeds all requirements for digital recording, yet also captures the warmth, smoothness, and delicate openness cherished by artists the world over. Switchable polar patterns, pre-attenuation pads, and bass roll-off filters are the same as in the C 414 B-ULS.

<table>
<thead>
<tr>
<th>Polar Pattern</th>
<th>C-2000</th>
<th>C-3000</th>
<th>C 4000 B</th>
<th>C 4500</th>
<th>C 414 B/ULS</th>
<th>C 414 B/TLII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>30 to 20,000 Hz</td>
<td>20 to 20,000 Hz</td>
<td>20 to 20,000 Hz</td>
<td>30 to 20,000 Hz</td>
<td>20 to 20,000 Hz</td>
<td>20 to 20,000 Hz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>20 mV/Pa (-34 dBV)</td>
<td>25 mV/Pa (-32 dBV)</td>
<td>25 mV/Pa (-32 dBV)</td>
<td>20 mV/Pa (-34 dBV)</td>
<td>12.5 mV/Pa (-38 dBV)</td>
<td>12.5 mV/Pa (-38 dBV)</td>
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<tr>
<td>Max SPL (THD = 0.5%)</td>
<td>140 dB</td>
<td>140 dB</td>
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<tr>
<td>Equivalent Noise Level *</td>
<td>20 dB</td>
<td>14 dB-A</td>
<td>8 dB-A</td>
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<tr>
<td>S/N Ratio*</td>
<td>74 dB</td>
<td>80 dB</td>
<td>86 dB</td>
<td>86 dB</td>
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<td>80 dB</td>
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<tr>
<td>Pre-attenuation Pad</td>
<td>10 dB, switchable</td>
<td>10 dB, switchable</td>
<td>10 dB, switchable</td>
<td>20 dB, switchable</td>
<td>10/20 dB, selectable</td>
<td>10/20 dB, selectable</td>
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<tr>
<td>Bass Rolloff Filter</td>
<td>6 dB/octave below 500 Hz</td>
<td>6 dB/octave below 500 Hz</td>
<td>12 dB/octave at 100 Hz</td>
<td>12 dB/octave at 120 Hz</td>
<td>12 dB/octave at 75 or 150 Hz</td>
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<tr>
<td>Impedance</td>
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<td>Recommended Loading</td>
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<td>&gt;1000 ohms</td>
<td>&gt;1000 ohms</td>
<td>&gt;600 ohms</td>
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</tbody>
</table>

* A-Weighted
Vintage Re-Issue Tube Microphone

Production of the original C 12 ceased in 1963, and over the years it gradually became a sought-after collectors' item—a true legendary recording instrument acclaimed worldwide for its exquisite sound. The new C 12 VR is true to the original C 12's electronic and acoustic design with only subtle refinements (made possible by modern manufacturing techniques and improvements in basic circuit components) made to increase overall robustness and reduce susceptibility to hum and noise.

With the recreated 1” twin diaphragm capsule design and the same 6072 vacuum tube at the heart of its circuitry, the C 12 VR ensures that even the most discriminating users will enjoy the trademark warmth, clarity and presence that characterized the original. Nine different polar patterns are available, any of which may be remotely selected from the N12 VR powering unit. Other user control features include two bass roll-off filters (also remotely selectable), switchable pre-attenuation pads, and a switchable 10 dB boost in nominal sensitivity. A large core-section output transformer minimizes low frequency distortion, and special shock mounting elements protect circuitry and provide acoustic isolation.

Supplied with power/remote unit, H15/T elastic shock mount suspension, 30’ cable, W42 foam windscreen, individually tested frequency response graph and a rugged aluminum carrying case.

H100 Spider Suspension

Supplied with the C 2000 B, C 3000 B, C 4000 B and C 414 B-TL II, the H100 is a universal shock mount that can be used for all microphones with shafts from 0.85 to 1”. The H100 Spider Suspension accepts most microphones, fits any standard mic stand, and is adjustable to any angle.

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-diaphragm condenser microphones with a vibrating diaphragm diameter of one inch (25mm). Electrical contact is established by the clamping ring so the entire diaphragm can vibrate freely.

The secret behind AKG’s pristine sound is the specific design of the diaphragms that shape the frequency response typical of AGK microphones. Between 2 and 3 kHz there is a 2-3 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.
ULTRA LINEAR SERIES (ULS)

Modular Condenser Microphone System

Based around the C 480 B preamplifier powering unit, the ULS system combines unparalleled performance with exceptional flexibility. Offering switchable cardioid, hypercardioid, omnidirectional, and highly directional shotgun elements, the ULS Series is designed for studio, broadcast and a variety of live sound and speech reinforcement applications in which state-of-the-art performance is mandated.

Patented electronic circuitry coupled to a transformerless output stage assures completely linear transfer characteristics across the entire audio bandwidth, while achieving very low self-noise. This, in combination with a typical SPL handling capability of 140 dB means a dynamic range exceeding 125 dB, making the system suitable for the most critical digital recording applications. Gold plated switch and connector contacts guarantee consistent performance. A specially designed output stage drives excessively long cables with no signal degradation. A complete line of accessories is available.

C 480 B Preamplifier

The C 480 B accommodates the CK 61-ULS, CK 62-ULS, CK 63-ULS and the CK 69-ULS capsule. Newly designed, the preamp has a vastly improved noise floor, permitting self noise performance with the four capsules in the range of 9 to 11 dB-A. Maximum sound pressure levels in the range of 144 dB (with the -10 dB pad) can be attained with no greater than 0.5 % distortion. It has an integral low cut filter (12 dB/octave) can be set for either 150 or 75 Hz, and a three position control for normal (0 dB), elevated sensitivity (+6 dB), and attenuated (-10 dB) sensitivity. The C 480 B operates on 48v phantom powering.

CK 60 SERIES CONDENSER CAPSULES

Each of the "ULS" series capsules must surpass the strictest tolerances for accurate presentation of both on and off-axis source material. A three micron, gold sputtered diaphragm utilizes AKG’s uni-tension, double-stretched mylar for superb transient and frequency response unaltered by temperature and humidity shifts.

CK 61-ULS Cardioid Capsule

The broadband, ultra linear frequency response and uniform polar pattern of the CK 61-ULS make it ideal for critical recording/reinforcement applications where suppression of off-axis sound is desired. Includes the W 32 foam windscreen.

CK 62-ULS Omnidirectional Capsule

Same as CK 61-ULS, except for omnidirectional polar pattern. For more reverberant sound recordings. Includes W 32 foam windscreen.

CK 63-ULS Hypercardioid Capsule

Same as CK 61-ULS, except for hypercardioid polar pattern. Better off-axis rejection provides better channel separation and in many cases, higher gain before feedback. Includes W 32 foam windscreen.

CK 69-ULS 2-in-1 Shotgun Capsule

Two shotgun capsules in one, with quick and easy conversion from long to short shotgun applications without compromising sonic integrity. In its long shotgun configuration, the CK 69-ULS delivers perfect results for outdoor applications—getting sounds in sync with picture— or indoor front of stage recording/reinforcement from approximately 20 to 24”. Unscrew the front half of the interference tube and the same capsule becomes a short shotgun for use in TV, film and video close-up work. Additionally, the short shotgun mode resolves the problems associated with performing interviews in noisy environments.

The CK 69-ULS operates flawlessly in high humidity environments, and windcreens are provided for both long and short configurations. Convenient, quiver-type carrying case accommodates capsules, powering module, and W 48 and W 49 windscreens. Includes original frequency response curves. Matte black finish.
Modular Condenser Mic System

The Blue Line Series consists of directional prepolarized condenser capsules and microphone configurations that are all compatible with a single powering/output assembly. With their unique snap-on attachment and modular construction, you can change capsules with different characteristics in seconds. Eight different capsules and a complete line of optional accessories—including an extension cable for operating the mic capsule up to 10’ from the powering/output module—offer a solution for every recording situation. Ideal for studio, live sound, and a variety of speech reinforcement applications—especially where the facility for switching capsules is a major advantage.

✦ The positive Modulock bayonet design allows changes to be made quickly
✦ Capsule designs employ gold sputtered diaphragms
✦ Self noise and maximum operating levels are exemplary, creating a very wide usable dynamic range for the most demanding operations. They also exhibit accurate axial response and uniform pattern control

SE 300 B Transformerless Powering/Output Module

The SE 300 B powering/output assembly is for use with all AKG Blue Line modular capsules. The SE 300 B operates from any 9-52V phantom power supply, and incorporates a 3-position switch offering linear response, -10dB pre-attenuation and 12dB/octave 75Hz bass-cut filter. Because of the general popularity of the cardioid pattern, the CK 91 cardioid capsule and SE 300 B powering/output assembly are sold as a single unit: the C 391 B microphone.

CK 91 Cardioid

The flat frequency response and uniform polar pattern of the CK 91 make it ideal for general applications where suppression of off-axis sound is desired.

CK 92 Omnidirectional

The CK 92 offers exceptionally neutral presentation of a source in its ambient sound field, providing uniform results regardless of the distance between microphone and source. This characteristic, combined with linear frequency response across the entire audio band, makes the CK 92 an excellent choice for capturing the natural acoustic subtleties of a recording environment.

CK 93 Hypercardioid

Similar to the CK 91, the CK 93 provides additional attenuation of 90° off-axis sounds. In addition to a higher ratio of direct to ambient sound, it also offers a virtually ruler-flat frequency response.

CK 94 Figure-Eight

Single diaphragm membrane construction provides precise reproduction of information from opposing directions. Excellent on-axis response combined with linear rejection of side information make the CK 94 ideal for Blumlein and MS stereo recording, studio vocals, and broadcast interviews.

CK 97-O Omnidirectional Lavalier

This tiny lavalier capsule has linear bass and midrange response, while a gentle rise around 8 kHz crisply accentuates voices. Omnidirectional pattern allows natural sound reproduction with no proximity build-up, while high sensitivity and low self-noise combine for exceptional S/N performance.

CK 97-C Cardioid Lavalier

The CK 97-C is ideal for a variety of sound reinforcement and film set applications. It offers a bass roll-off at 400 Hz to reduce chest resonance, gentle 10 kHz rise to improve vocal clarity, and uniform cardioid pickup pattern for excellent gain-before-feedback.

CK 97-CVR

Acoustically identical to the CK 97-C, the CK 97-CVR incorporates the same capsule into a 15-inch mini gooseneck to create an unobtrusive, high quality microphone for podium, pulpit or boardroom use.

CK 98 Short Shotgun Capsule

The CK 98 combines high sensitivity and controlled directivity. It offers excellent reach, thanks to a very tight polar pattern and exceptionally low self noise. Small size and light weight make the CK 98 ideal for boom applications, while the smooth, wideband frequency response makes it a superb choice for edge-of-stage and ceiling placements.
### Ultra Linear Series (ULS)

Specifications (measured with C 480 B preamp)

<table>
<thead>
<tr>
<th>Transducer Principle</th>
<th>CK 61-ULS</th>
<th>CK 62-ULS</th>
<th>CK 63-ULS</th>
<th>CK 69-ULS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>20–20kHz ± 1 dB</td>
<td>20–20kHz ± 1 dB</td>
<td>20–20kHz ± 1 dB</td>
<td>20–18kHz ± 2 dB</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Shotgun (2-section)</td>
</tr>
<tr>
<td>Sensitivity at 1000 Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0 dB setting)</td>
<td>20 mV/Pa; -34 dBV</td>
<td>20 mV/Pa; -34 dBV</td>
<td>20 mV/Pa; -34 dBV</td>
<td>27 mV/Pa; -31 dBV</td>
</tr>
<tr>
<td>(+6 dB setting)</td>
<td>40 mV/Pa; -28 dBV</td>
<td>40 mV/Pa; -28 dBV</td>
<td>40 mV/Pa; -28 dBV</td>
<td>54 mV/Pa; -25 dBV</td>
</tr>
<tr>
<td>(-10 dB setting)</td>
<td>6.3 mV/Pa; -44 dBV</td>
<td>6.3 mV/Pa; -44 dBV</td>
<td>6.3 mV/Pa; -44 dBV</td>
<td>8.5 mV/Pa; -41 dBV</td>
</tr>
<tr>
<td>Equivalent Noise Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0 dB setting)</td>
<td>11 dB-A</td>
<td>11 dB-A</td>
<td>11 dB-A</td>
<td>9 dB-A</td>
</tr>
<tr>
<td>(+6 dB setting)</td>
<td>13 dB-A</td>
<td>13 dB-A</td>
<td>13 dB-A</td>
<td>11 dB-A</td>
</tr>
<tr>
<td>(-10 dB setting)</td>
<td>17 dB-A</td>
<td>17 dB-A</td>
<td>17 dB-A</td>
<td>15 dB-A</td>
</tr>
<tr>
<td>Max. SPL for 0.5 % THD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0 dB setting)</td>
<td>140 dB</td>
<td>140 dB</td>
<td>140 dB</td>
<td>140 dB</td>
</tr>
<tr>
<td>(+6 dB setting)</td>
<td>134 dB</td>
<td>134 dB</td>
<td>134 dB</td>
<td>134 dB</td>
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<tr>
<td>(-10 dB setting)</td>
<td>144 dB</td>
<td>144 dB</td>
<td>144 dB</td>
<td>142 dB</td>
</tr>
<tr>
<td>S/N Ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0 dB setting)</td>
<td>83 dB</td>
<td>83 dB</td>
<td>83 dB</td>
<td>85 dB</td>
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<tr>
<td>(+6 dB setting)</td>
<td>81 dB</td>
<td>81 dB</td>
<td>81 dB</td>
<td>83 dB</td>
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<tr>
<td>(-10 dB setting)</td>
<td>77 dB</td>
<td>77 dB</td>
<td>79 dB</td>
<td></td>
</tr>
<tr>
<td>Finish</td>
<td>Non-reflective black</td>
<td>Non-reflective black</td>
<td>Non-reflective black</td>
<td>Non-reflective black</td>
</tr>
<tr>
<td>Capsule Dimensions</td>
<td>.83 x 1”</td>
<td>.83 x 1”</td>
<td>.83 x 1”</td>
<td>.83 x 6.9” (single section) .83 x 12.5” (dual section)</td>
</tr>
</tbody>
</table>

### BlueLine Series

Specifications with SE300B

<table>
<thead>
<tr>
<th>Transducer Principle</th>
<th>CK91 B</th>
<th>CK 92</th>
<th>CK 93</th>
<th>CK 94</th>
<th>CK 97-0</th>
<th>CK 97-C/97-CVR</th>
<th>CK 98</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>20–20kHz</td>
<td>20–20kHz</td>
<td>20–20kHz</td>
<td>20–18kHz</td>
<td>150–18kHz</td>
<td>20–20kHz</td>
<td>20–20kHz</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Sensitivity at 1000 Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0 dB setting)</td>
<td>10 mV/Pa; -40 dBV</td>
<td>10 mV/Pa; -40 dBV</td>
<td>10 mV/Pa; -40 dBV</td>
<td>10 mV/Pa; -40 dBV</td>
<td>12 mV/Pa; -38 dBV</td>
<td>25 mV/Pa; -32 dBV</td>
<td></td>
</tr>
<tr>
<td>Equivalent Noise Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0 dB setting)</td>
<td>17 dB-A</td>
<td>17 dB-A</td>
<td>17 dB-A</td>
<td>22 dB-A</td>
<td>24 dB-A</td>
<td>26 dB-A</td>
<td>17 dB-A</td>
</tr>
<tr>
<td>Max SPL for 1% THD</td>
<td>132 dB</td>
<td>132 dB</td>
<td>132 dB</td>
<td>132 dB</td>
<td>120 dB</td>
<td>120 dB</td>
<td>124 dB</td>
</tr>
<tr>
<td>S/N Ratio (A-weighted)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0 dB setting)</td>
<td>77 dB</td>
<td>77 dB</td>
<td>72 dB</td>
<td>70 dB</td>
<td>68 dB</td>
<td>77 dB</td>
<td></td>
</tr>
<tr>
<td>Electrical Impedance</td>
<td>&lt; 200 ohms</td>
<td>&lt; 200 ohms</td>
<td>&lt; 200 ohms</td>
<td>&lt; 200 ohms</td>
<td>&lt; 200 ohms</td>
<td>&lt; 200 ohms</td>
<td>&lt; 200 ohms</td>
</tr>
<tr>
<td>Load Impedance</td>
<td>&gt; 1,000 ohms</td>
<td>&gt; 1,000 ohms</td>
<td>&gt; 1,000 ohms</td>
<td>&gt; 1,000 ohms</td>
<td>&gt; 1,000 ohms</td>
<td>&gt; 1,000 ohms</td>
<td>&gt; 1,000 ohms</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>9 - 52 Vdc Phantom powering for 300 B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector</td>
<td>All models XLR male output when connected to SE 300 B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable Length</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>10’</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Finish</td>
<td>Dark gray matte</td>
<td>Dark gray matte</td>
<td>Dark gray matte</td>
<td>Dark gray matte</td>
<td>Dark gray matte</td>
<td>Dark gray matte</td>
<td>Dark gray matte</td>
</tr>
<tr>
<td>Capsule Dimensions</td>
<td>.7 x 2”</td>
<td>.7 x 2”</td>
<td>.7 x 2”</td>
<td>.7 x 2.5”</td>
<td>.3 x 0.7”</td>
<td>.4 x 1.0”</td>
<td>.4 x 10.2”</td>
</tr>
</tbody>
</table>

With the 10-dB pad engaged, all SPL values for 1% THD can be raised 10 dB. Specifications measured with capsules attached to SE 300 B.
C 426 B Stereo Microphone

A compact and highly refined mic system designed for the most critical single-point stereo recording applications. A direct descendant of AKG’s renowned C 422 and C 24 large diaphragm stereo condensers, the C 426 B incorporates new technology for significant improvements across virtually all performance parameters: dynamic range, self-noise, sensitivity, linearity, frequency response between channels, and crosstalk. Two gold-sputtered twin-diaphragm capsules are arranged in a coincident pair; the microphone head may be rotated 45° against the shaft and the upper system rotated 270° against the lower to facilitate quick changeover from M/S to X/Y techniques. Two tightly focused LEDs mounted on each rotating capsule provide quick visual verification of capsule angle from a distance. Switches on the mic housing select bass roll-off (12 dB/octave at 75 Hz) and -10 dB pre-attenuation. Included remote control system allows completely noiseless selection among the nine polar patterns available for each capsule. Complete system also includes shock mount/stand adapter, foam windscreen, 66’ connecting cable, and rugged carrying case.

C 568 EB Shotgun Microphone

High directivity and wide frequency response in a relatively short integrated unit make this an ideal microphone for theater, sound reinforcement, and film/video recording. Due to its compact and lightweight design, the C 568 EB is ideal for camera mount applications. The C 568 EB is a backplate electret condenser design which operates on both pressure gradient and interference principles. Below 500 Hz it functions as a hypercardioid microphone; above 500 Hz the acoustic interference tube introduces increasing directivity. A switch selectable 12 dB/octave 150 Hz roll-off filter effectively suppresses rumble and wind noise. Robust, all-metal housing contains the built-in preamp/impedance converter. Phantom powering (9-52v) required. Foam windscreen and stand adapter included.

D230 Rugged Dynamic ENG Microphone

A robust ENG (electronic news gathering) mic that incorporates a high output rare earth magnet structure designed to deliver exceptional sensitivity and clarity in the demanding news gathering field. Its response has been tailored for maximum intelligibility of close-in speech, and its omnidirectional pattern is immune to proximity effects. An internal hum compensation coil allows microphone use in environments where ac hum fields may be significant. It has an integral windscreen and is designed for very low handling noise. The extended shaft allows for easy placement of station flags without typical handling problems. The housing is made of an extremely rugged die cast metal and has a dark matte finish for minimum reflection or glare on television. Comes complete with stand adapter.

<table>
<thead>
<tr>
<th></th>
<th>C426 B</th>
<th>C568 EB</th>
<th>D230</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>20-20kHz</td>
<td>20-20kHz</td>
<td>40-20kHz</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>🗡️, 🗡️, 🗡️ (with 6 intermediate positions)</td>
<td>🗡️ / 🗡️</td>
<td>🗡️</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>11 mV/Pa (-39 dBV) (each channel)</td>
<td>11 mV/Pa (-39 dBV)</td>
<td>2.5 mV/Pa (-52 dBV)</td>
</tr>
<tr>
<td>Bass Cut Filter</td>
<td>12 dB/octave roll-off at 75 Hz</td>
<td>12 dB/octave below 120 Hz</td>
<td>-</td>
</tr>
<tr>
<td>Equivalent Noise Level</td>
<td>14 dB-A</td>
<td>18 dB-A</td>
<td>-</td>
</tr>
<tr>
<td>Max SPL for 0.5 % THD</td>
<td>132 dB (142 dB at-10 dB)</td>
<td>128 dB</td>
<td>-</td>
</tr>
<tr>
<td>Impedance</td>
<td>200Ω</td>
<td>600Ω</td>
<td>320Ω</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>9-52 V phantom power</td>
<td>9 to 52 V phantom power</td>
<td>N/A</td>
</tr>
<tr>
<td>Current Consumption</td>
<td>approx. 2 mA per channel</td>
<td>&lt;2 mA</td>
<td>N/A</td>
</tr>
<tr>
<td>Size, Net Weight</td>
<td>1.65/1.3 Ø x 9.25”; 1.04 lbs.</td>
<td>0.8 Ø x 10”; 5.6 oz.</td>
<td>2.00 x 8.5”; 8 oz.</td>
</tr>
</tbody>
</table>
AKG

EMOTION SERIES

'The Sound That Rocks'

AKG’s Emotion series incorporate a unique design and the revolutionary Varimotion process to far surpass the performance parameters of other microphones. In addition, handling and cable noise is all but eliminated by AKG’s Doubleflex Anti-Vibration System. The end result are mics with the performance characteristics of an expensive studio mic at the price of a music store standard. Patented technology, the Tiefzieh Varimotion System allows AKG to produce a diaphragm of varying thickness in a single press. By doing so AKG almost eliminates the need for tuning resonators so that the microphone’s sonic characteristics can now be tuned at the capsule, effectively reducing the cost of production by more than half. The microphones come in a rugged all metal housing, some utilizing 24 karat gold plated connectors. Last, they feature a neodymium magnet system to provide an extremely powerful output signal. This will make your vocals cut through the loudest of rhythm sections. For vocal or instrumental music, for moderators, lead, or backing vocalists, Emotion Series mics are the ideal tool on stage.

Varimotion Technology

Varimotion refers to the patented process used to create the diaphragm. For the first time, diaphragms can be made whose thickness varies along their diameter. Using this technology, diaphragm thickness can be varied during the manufacturing process resulting in a more accurate and natural reproduction of the sound while also reducing the need for expensive mechanical tuning resonators.

The Doubleflex Shock Mount

A patented dual shock mount system, the extremely efficient Doubleflex shock mount system comprises two separate shock absorbing suspension rings for the transducer. These work together to provide optimum suppression of all kinds of unwanted noise such as handling and cable noise—especially important on stage. Allows the mic to “focus” on your voice rather than picking up unwanted noise.

D 660 S
Dynamic Microphone

The D 660 S is a unidirectional dynamic microphone with rugged die-cast metal body developed specifically for miking speech, vocals, and instruments on stage, and for Karaoke and home recording applications. A professional entry-level vocal microphone, the D 660 S offers a price/performance ratio that is unbeatable.

- The transducer element of the D 660 S has been designed for use with both sound reinforcement systems and cassette or home studio recorders. Neutral low and mid frequency response combined with a 6 dB presence boost between 4 and 8 kHz ensures smooth sound and excellent intelligibility
- Extremely rugged protective basket ensures incredible durability and keeps the highly sensitive transducer out of harms way. It is easy to remove and the internal windscreen is easy to clean
- Uses a dual shock mount to suppress of unwanted noise
- Integrated on/off switch indicates microphone status
- Includes stand adapter and carrying case

D 770
Multipurpose Instrument/Vocal Microphone

The D770 is a rugged dynamic cardioid microphone intended for on-stage instrumental and vocal pickup. Its cardioid pattern is uniform with frequency, and response has been boosted at mid and high frequencies for crisp instrumental pickup and improved speech intelligibility. The microphone has a heavy duty steel screen with an integral diecast support frame. The capsule’s elastic Doubleflex suspension eliminates handling and cable noise. Outstanding performance is obtained by means of AKG Varimotion diaphragm technology, a high output magnet, and a super-cardioid polar pattern for excellent gain-before-feedback and superb off axis rejection.

- Frequency response is shaped especially for instrumental/vocal performance. The wide frequency response is slightly boosted in the mid and high frequency ranges for a crisp instrumental sound (wind instruments, mouth-organ, guitar amps, percussion instruments and backing vocals) and for better speech intelligibility
- Utilizing AKG’s Varimotion technology, diaphragm thickness varies from 20 microns at the edge to 40 microns at the center. This produces extended bass response, virtually eliminating the need for a tuning resonator
- XLR plug with 24 carat gold-plated pins
- Doubleflex shock mounted transducer system used with the capsule assembly places the primary resonance of the moving system well below the audible range, resulting in excellent isolation of handling and cable induced noises
- Duraflex spring steel wire-mesh cap with integrated wind and pop screen is resistant to deep denting providing optimum protection for the transducer capsule beneath it
- The light-weight body is made of die-cast zinc alloy. Has a dark matte finish for minimum reflection and glare
- Includes a vinyl carrying case and SA 44 stand adapter
**D 880/ D 880S**

**Dynamic Vocal Microphone**

Performance microphone with a frequency response designed specifically for lead and backing vocals. Wind noise and sibilance are eliminated by an integrated wind and pop screen. Its outstanding performance is obtained by means of the newly developed AKG Varimotion diaphragm technology and a frequency-independent supercardioid polar pattern that provides very effective feedback suppression. Handling noise is all but eliminated with the Doubleflex anti-vibration system. The D 880/D 880 S comes complete with a vinyl carrying case and SA 44 stand adapter. S version has on/off switch.

**C900**

**Condenser Vocal Microphone**

The key to getting your emotions across to your audience is in your hand—the microphone. Knowing this, AKG left conventional wisdom behind and set the standard with the Emotion line of dynamic microphones. Now AKG is raising the standard again with the C 900 condenser microphone.

- A professional condenser vocal microphone, the C900 will make your voice cut through the loudest mix - on any stage
- Features a frequency independent cardioid polar pattern that has not only been optimized for exceptionally high gain before feedback, but also for use with in-ear monitor systems
- The transducer is 24-carat gold plated for optimum protection from corrosion and humidity. The entire transducer element is shock mounted in a special elastic ring
- In addition to the transducer case and decorative ring, the XLR connector is also 24-carat hard gold plated for exceptionally reliable electrical contact
- The C 900 is extremely insensitive to handling noise. A resonance weight tunes the transducer resonance frequency to a value where handling noise is almost totally eliminated
- Presence Boost Adapter can be installed to boost the 5 to 9 kHz range by 2 to 4 dB for even more brilliant high-frequency sound and better intelligibility. This improvement adds to the mic's versatility in vocal performance as well as overhead, cymbal, or hi-hat miking
- The impact resistant die-cast metal body is finished with "soft-touch" enamel that feels pleasant to the touch, while the wire-mesh grill is made of first-rate spring steel to provide added protection from the hardships of touring
- The C 900 package includes the microphone with its rugged die-cast metal body, a stand adapter, PB 1000 Presence Boost Adapter and carrying case

AKG’s low cost Performer Series includes three mic each designed and manufactured in Austria. Equipped with high output Neodymium capsules and precision AKG engineering these mics meet the needs of professionals at a price accessible to amateurs and beginning musicians. Each mic comes with removable grills for easy washing of windscreens, on/off switches, and extremely rugged housings designed for the rigors of live performance.
Tri-Power Condenser Vocal Microphone

The C 5900 combines the detailed transparency of a premium AKG studio condenser with the road tough construction, low-handling noise, and feedback rejection required of a true stage performance microphone. At the heart of the C 5900 is AKG’s condenser capsule with an ultra-thin, gold-sputtered, double-stretched diaphragm which precisely captures every subtle nuance of a vocal performance. Transient response is superb, yet vocal quality remains full and warm with no trace of harshness. Vocal contoured response projects to the front of the mix, and a 3-way switch allows performers to customize proximity effect by choosing flat response or one of two bass roll-off curves. A tightly controlled hypercardioid pattern and uniform polar response ensure maximum gain-before-feedback, with consistently predictable performance when used close-in on monitors. A four-layer filter assembly effectively suppresses P-pops and wind noise, while the integrated and hardened protective basket of AKG’s DuraShell system safeguards all internal components. AKG’s InterSpider three-point internal elastomer suspension isolates the capsule from handling noise so energetic performers can work the stage without worry.

**FEATURES**

- Rugged condenser mic designed for on-stage instrumental and vocal pickup
- Hypercardioid pattern is uniform with frequency, and response has been boosted slightly at mid and high frequencies for crisp instrumental pickup and improved speech intelligibility
- Mic capsule is shock mounted with a removable wire mesh grill. The smooth triangular shape of the mic is easy to hold and is stable when placed on a surface
- Switchable 6 dB/octave bass rolloff at 150Hz and 12 dB/octave bass cut at 100Hz provide flexibility in dealing with proximity effect
- Light-weight die cast metal body with dark matte finish for minimum reflection and glare
- Broad high frequency rise (4 dB) for added presence
- Internal elastic suspension for reduced handling noise
- Universal phantom powering

### C 535 EB Cardioid Mic

The C 535 EB has the clean, open characteristic of AKG’s best studio condensers, enhanced by a 2dB rise between the 7 to 12 kHz range to give added presence to vocalists. An integral four-position switch tailors output level and bass roll-off for a variety of uses. A sharp LF cut at the full output level reduces pops and handling noise in vocal applications, while a more gradual roll-off at the reduced output is ideal for most instrument applications.

- Versatile condenser microphone for studio and vocal applications
- Operates on phantom powering from 9 to 52v DC

### Specifications

<table>
<thead>
<tr>
<th>C5900</th>
<th>C535B</th>
<th>D3700 (S)</th>
<th>D3900</th>
<th>D660</th>
<th>D770</th>
<th>D880 (S)</th>
<th>C900</th>
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<tbody>
<tr>
<td>Transducer Type</td>
<td>Condenser</td>
<td>Condenser</td>
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<td>Dynamic</td>
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<td>Dynamic</td>
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<tr>
<td>Frequency Response</td>
<td>20–22kHz</td>
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<td>40–20kHz</td>
<td>40–21kHz</td>
<td>70–20kHz</td>
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<td>XLR</td>
<td>XLR-M</td>
<td>XLR-M</td>
<td>XLR-M</td>
<td>XLR-M</td>
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<td>Sensitivity at 1000 Hz (re 1V/Pa)</td>
<td>6 mV/Pa (-45 dBV)</td>
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<td>2.5 mV/Pa (-52 dB)</td>
<td>2.5 mV/Pa (-61 dBV)</td>
<td>2.0 mV/Pa (-54 dBV)</td>
<td>1.8 mV/Pa (-75 dBV)</td>
<td>2.5 mV/Pa (-52 dBV)</td>
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<td>Max. SPL for 1% THD</td>
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<td>137 dB</td>
<td>147 dB</td>
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<td>140 dB</td>
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<td>Size (Max. dia/length)</td>
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<td>1.8 x 7.3&quot;</td>
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<td>1.97 x 7.13&quot;</td>
<td>1.97 x 7.13&quot;</td>
<td>1.97 x 7.13&quot;</td>
</tr>
</tbody>
</table>
**Tri-Power Dynamic Vocal Microphones**

Rugged construction, distinctive Tri-Power styling, and outstanding sonic performance for on-stage instrumental and vocal pickup. The D3700 and D 3800 offer a combination of unsurpassed performance and exclusive features unmatched by any other dynamic vocal mics. At the heart of both mics is AKG’s Maximum Flux neodymium/iron-boron rare earth transducer. This high output element, coupled with a uniformly tight hypercardioid pickup pattern, provides exceptional gain-before-feedback right on top of high level stage monitors.

- Vocal contoured response rises gently starting at 2 kHz to pull vocals in the front of the mix, while a smooth low end boost adds fullness and body.
- Extremely high SPL levels are handled easily without harshness or boominess.
- Smoothly triangulated PowerGrip body balances perfectly in the hand, and rugged die-cast body with Iso-Damp internal suspension guarantees reliability under the most severe touring conditions.
- Built-in windscreen/pop filter removes easily for cleaning.
- They are made of die cast zinc alloy and have a dark matte finish for minimum reflection and glare.
- The D3700S is identical to the D3700 except for the addition of a noiseless, recessed on/off switch. The D3800 offers even more sensitivity than the D3700.

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**SPECIALTY MICROPHONES**

**C 747 Podium Condenser Mic**

Practically invisible, the pencil-sized C 747 picks up voices and instruments at surprising distances with phenomenal fullness and clarity. The C 747 is a premium quality “spot” or “accent” mic designed to solve difficult placement problems in a variety of exacting orchestral, choir, podium, and boardroom applications. Smooth, extended frequency response makes it suitable for high quality live music recording, while its hypercardioid response is designed to be “forgiving”, making it an excellent choice for critical podium/pulpit or boardroom applications where speakers tend to wander off-axis.

A tuned interference tube provides extended bass response, high sensitivity, and excellent S/N ratio. A LF roll-off switch filters out low-frequency rumble. Mounting accessories include shock mount/adapter, windscreen, mini gooseneck, swivel stand adapter, mounting clamp, and thread link. Operates on 9-52v DC phantom power.

**HSC200SR Broadcast Headset**

The HSC200SR is a combination of semi-open stereo headphones and an electret microphone that is both mechanically and electrically adjustable. The mic element rests in a shock mount that suppresses both cable noise and acoustic headphone leakage. Soldered jumpers in the phantom powering adapter allow you to optimally adjust the mic’s frequency response to individual requirements. Operates on 9-52v DC phantom power. Mic sensitivity is 7 mV/Pa at 1 kHz. Has a XLR mic connector and headphone stereo jack.

**HSD200SR Communications Headset**

The HSD200SR is a combination stereo headset and close-talking dynamic microphone intended for hands-free operation in a communications environment. Response is tailored with a gentle rolloff below 200Hz and a broad peak centered at 3 kHz to increase speech intelligibility. The semi-open, supra-aural headphone provides a comfortable fit around the ears, while the semi-open design enables the user to directly hear sounds and speech originating near by.
Plug in the Giants
The MicroMic III Series gives you a wide choice of dynamic or condenser miniature microphones as well as accessories.

C 418 Drum and Percussion MicroMic
The frequency response of the C 418 PP has been specifically tailored for drum and percussion miking. Compensating for the bass boost which is inherent when putting the microphone so close to the drum, the microphone reproduces a punchy sound that suppresses rumble and unwanted upper head ringing.

C 418 PP for phantom powering, with preamp/XLR connector
C 418 L with 1/8” gold-plated lockable mini jack

C 419 Wind Instruments, Drums and Percussions MicroMic
Clips onto the bell of a trumpet, saxophone, trombone, tuba, etc. giving freedom to horn players. Its tight hypercardioid pattern makes it problem-free for stage work near floor monitors. The natural sound of the horn is retained via the flat response with a gentle high frequency peak of the transducer element, allowing the horn player to reach the audience with power and clarity.

C 419 PP for phantom powering, with preamp/XLR connector
C 419 L with 1/8” gold-plated lockable mini jack

C 420 Headset MicroMic for Vocals and Flute
The C 420III is a condenser design with a full bandwidth 20 - 20 kHz frequency response. It captures the voice with a detailed, brilliant sound quality. The mic provides the performer with a pure, powerful sound that carries the punch and presence to cut through to the audience. Ideal for singing keyboard players, drummers, guitarists, dancers and anyone who needs high quality vocals in a hands-free application.

C 420 PP for phantom powering, with preamp/XLR connector
C 420 L with 1/8” gold-plated lockable mini jack

C 430 Cymbal and Overhead MicroMic
Designed for cymbal and overhead miking, the frequency response of the C 430 ensures a unique crisp sound. With its extremely compact external dimensions, this microphone will keep a low profile on the drum kit without compromising audio quality.
C 430 with W32 windscreen and SA 40 stand adapter

C 444 Headset MicroMic
The C 444 L is extremely easy to use, rests securely and comfortably on the head, and is perspiration-proof. A dedicated moisture shield prevents perspiration and water from penetrating into the transducer capsule.
C 444 L with mini XLR connector and W444 windscreen
DB 1
Double Bass Bridge Pickup

The piezoelectric transducer element is incorporated into a conventional, wooden double bass bridge. It therefore permits a non compromising, natural audio quality. Providing seamless performance and quality in acoustical bass sound reproduction, the DB-1 is designed to fit every conventional standard double bass. The pickup is an easy-to-install piezoelectric transducer element integrated into a conventional wooden double bass bridge. The DB 1 installs on the double bass like a standard bridge is mounted on the instrument.

DB-1 with a preamp/XLR connector

B 15 MicroMic In-line Battery Supply
The B 15 is an in-line battery supply for all C 400 PP versions of MicroMic III Series microphones that also connects directly to the C 430 overhead MicroMic. An integrated on/off switch helps prolong battery life. The B 15 uses a single AAA size 1.5-V battery (average battery life is 30 hours). The B 15 can also be used for all commercial condenser microphones operating off 12v phantom power.

B 29 L Power Supply and Mini Mixer
The B 29 L powers one or two C 400 MicroMic III Series microphones. It features an on/off switch and status LED as well as a mic/line selector for matching the output level to the input of the connected mixer or recorder, etc. The B 29 L operates on a 9v battery, with an average battery life of 50 hours. Two volume controls allow you to balance the levels of the two microphones. A supplied clip makes it easy to attach the B 29 L to a belt or guitar strap, etc.

MPA III L MicroMic Phantom Power Adapter
Adapter cable with 1/8” lockable jack socket and male 3-pin XLR connector. The MPA III L reduces the usual phantom powering voltage (9 to 52v) supplied by mixing consoles to the operating voltage (9v maximum) of AKG MicroMics.

### Instrument Microphones

**D409**
- Dynamic Condenser
- Frequency Response (Hz): 100-17k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 124 dB
- Impedance: 600Ω
- Sensitivity at 1kHz: 1 mV/Pa

**C411**
- Dynamic Condenser
- Frequency Response (Hz): 10-18k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 96 dB
- Impedance: 200Ω
- Sensitivity at 1kHz: 1 mV/Pa

**C416**
- Dynamic Condenser
- Frequency Response (Hz): 10-18k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 121 dB
- Impedance: 200Ω
- Sensitivity at 1kHz: 7mV/Pa

**C417**
- Dynamic Condenser
- Frequency Response (Hz): 20-20k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 118 dB
- Impedance: 200Ω
- Sensitivity at 1kHz: 20-20k

**C418**
- Dynamic Condenser
- Frequency Response (Hz): 20-20k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 131 dB
- Impedance: 200Ω
- Sensitivity at 1kHz: 20-20k

**C419**
- Dynamic Condenser
- Frequency Response (Hz): 50-20k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 126 dB
- Impedance: 200Ω
- Sensitivity at 1kHz: 20-20k

**C420**
- Dynamic Condenser
- Frequency Response (Hz): 20-20k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 126 dB
- Impedance: 200Ω
- Sensitivity at 1kHz: 20-20k

**C430**
- Dynamic Condenser
- Frequency Response (Hz): 20-20k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 126 dB
- Impedance: 200Ω
- Sensitivity at 1kHz: 20-20k

**C444**
- Dynamic Condenser
- Frequency Response (Hz): 5-5k
- Polar Pattern: vibration
- Maximum SPL at 1kHz: 130 dB
- Impedance: 200Ω
- Sensitivity at 1kHz: 2.5mV/Pa

**D550**
A cardioid dynamic microphone, designed primarily as a bass instrument microphone for rough onstage use on bass drum, tuba, trombone, bass amps, etc. The wide frequency response of the D 550 that slightly favors the low frequency and treble ranges ensures a very powerful sound and good intelligibility.

**D112**
Developed for clean kick drum and bass guitar performance with a powerful, punchy sound. The D112 is absolutely free of distortion even at high sound pressure levels, and offers very low diaphragm resonance, a relatively narrow-band rising high frequency response at 4 kHz and an extremely robust construction.

**D440**
A cardioid dynamic mic, designed primarily as an instrument microphone for rough onstage use on percussion instruments, guitar amps, wind instruments etc. The wide frequency response of the D 440 that slightly favors the mid frequency and treble regions ensures good intelligibility.
Cardioid Condenser Microphone

A versatile large-diaphragm microphone, the AT4040 features a true condenser design (externally polarized) and utilizes A-T’s latest transducer technology with state-of-the-art surface-mount electronics and transformerless circuitry. It also features a new large-diaphragm element designed specifically to provide smooth, natural sonic characteristics with a wide dynamic range and the ability to handle extremely high SPLs. The AT4040 has a cardioid polar pattern and utilizes an aged, vapor-deposited-gold large-diaphragm condenser element. A precision-machined, nickel-plated brass element baffle provides enhanced element stability and optimal sensitivity. An open acoustical environment of the symmetrical housing assembly minimizes unwanted internal reflections. In addition, the AT4040’s 2-micron-thick diaphragm provides accurate reproduction of even the subtlest sounds without sacrificing high-frequency performance.

- Has an extended flat frequency response (20-20,000 Hz), wide dynamic range (133 dB, 1 kHz at max SPL), and can handle high SPLs (up to 155 dB with the 10 dB pad on).
- Distinctive transformerless circuitry virtually eliminates low-frequency distortion and enables it to deliver high-speed transients.
- Operates on 48V phantom power and has a switchable low-frequency roll-off (at 80 Hz, 12 dB/octave).

In 1992, Audio-Technica rocked the audio world with the introduction of the legendary AT4033 Cardioid Condenser Microphone. Now, a decade later, A-T pays tribute to this classic transducer technology with the AT4033/CL. Embraced by professionals enamored with its strong up-front presence and low-noise circuitry, the AT4033/CL offers exceptional transient response and clean output signal even under the most adverse conditions. A specially contoured, vapor-deposited gold diaphragm provides accurate reproduction of even the subtlest sounds, especially high-frequency signals.

- Has an extended flat frequency response (20-20,000 Hz), wide dynamic range (133 dB, 1 kHz at max SPL), and can handle high SPLs (up to 155 dB with the 10 dB pad on).
- Distinctive transformerless circuitry virtually eliminates low-frequency distortion and enables it to deliver high-speed transients.
- Operates on 48V phantom power and has a switchable low-frequency roll-off (at 80 Hz, 12 dB/octave).
- Includes the heavy-duty AT8449 shock mount to provide mechanical isolation and secure mounting. Also includes a dust cover and protective microphone carrying case.
- Like all 40 Series microphones, each AT4040 is individually tested to ensure it maintains optimum performance characteristics and consistency from model to model.

AT4047/ SV
Cardioid Condenser Microphone

A large-diaphragm, cardioid condenser microphone, the AT4047/SV incorporates a transformer-coupled output and specially-tuned element to provide sonic characteristics reminiscent of early F.E.T. studio microphone designs, while utilizing modern manufacturing techniques to ensure consistency and reliability. The AT4047/SV features a dual-diaphragm configuration that allows undistorted reproduction of high sound pressure level signals at all frequencies. The 2-micron-thick, vapor-deposited gold diaphragms provide accurate reproduction of even the most subtle sounds, especially high-frequency signals.

- Has a wide dynamic range of 140 dB without the built-in attenuator, and it accepts up to 159 dB SPL with the 10dB pad on.
- Floating construction mounting of the element provides isolation from noise and vibration, while an integral 80 Hz hi-pass filter provides easy switching from a flat frequency response to a low-end roll-off.
Multi-Pattern Condenser Microphone

The AT4050/CM 5 is a transformerless, multiple-pattern studio microphone designed for use in the most demanding applications. The condenser element utilizes dual, gold-plated and aged, large diaphragms for extended frequency response. The mic’s polar pattern can be switched for cardioid, omnidirectional or figure-of-eight operation. This, coupled with low-noise transformerless electronics, makes this microphone ideal for the most critical digital recordings. The dynamic range of the AT4050/CM 5 is 132 dB without the built-in attenuator and it accepts up to 149 dB SPL without capsule or electronic-system distortion above 1% T.H.D.

- The AT4050/CM 5’s low-noise circuitry is symmetrical and transformerless, resulting in exceptional transient response and clean output signals, even under high-output conditions.
- To ensure optimum performance, floating-construction mounting of the element provides isolation from noise and vibration.
- Handles very high sound pressure levels with ease. A switchable 10 dB pad is built-in, increasing the SPL capabilities to 159 dB.
- An integral 80 Hz hi-pass filter provides easy switching from a flat frequency response to a low-end roll-off. The hi-pass switch is recessed to prevent accidental activation.

<table>
<thead>
<tr>
<th>Element</th>
<th>AT4033/ CL</th>
<th>AT4040</th>
<th>AT4047/ SV</th>
<th>AT4050/ CM5</th>
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<td>Condenser</td>
<td>Condenser</td>
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<td>20 - 18kHz</td>
<td>20 - 18kHz</td>
<td>20 - 20kHz</td>
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<td>-32 dB (25.1 mV)</td>
<td>-35 dB (17.7 mV)</td>
<td>-36 dB (15.8 mV)</td>
<td>-34 dB (19.9 mV)</td>
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<td>250Ω</td>
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<td>200Ω</td>
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<td>131 dB</td>
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<td>48V</td>
<td>48V (±4V)</td>
<td>48V (±4V)</td>
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<tr>
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<td>12.7 oz</td>
<td>14.5 oz</td>
<td>18.0 oz</td>
<td>22.6 oz</td>
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</table>

AT4060

Cardioid Vacuum Tube Condenser Studio Microphone

The AT4060 is a cardioid vacuum tube condenser microphone designed for use in the most demanding studio applications. It utilizes dual, gold-plated and aged, large-diaphragm elements for extended frequency response. The AT4060 has a wide dynamic range of 131 dB and the ability to accept up to 150 dB SPL without capsule or electronic-system distortion above 1% T.H.D. These capabilities, coupled with the benefits of exceptionally low self-noise and very high output, combine in a versatile microphone that meets the diverse requirements of contemporary recording situations, while still providing the warm sound of vintage valve design. Each hand-selected tube is individually aged and tested, then employed in a uniquely-configured circuit for enhanced tube performance. Specially-tuned elements improve dynamic range and the ability to handle high SPLs without sacrificing high-frequency characteristics. Floating-construction mounting of the elements provides isolation from noise and vibration.
The AT4049a, AT4051a and AT4053a are transformerless phantom-powered condenser studio microphones engineered for professional recording and broadcast. They offer smooth, flat frequency response and a clean signal, even in high-output conditions. They also feature exceptionally low self noise, high output and fast transient response. But what separates them from other mics, is that the head capsules may be easily removed, stored and replaced with an optional omnidirectional, cardioid or hypercardioid capsule to meet the needs of the widest range of miking applications.

They combine the benefits of exceptionally low self-noise with very high output. Equally important, they handle very high sound pressure levels with ease. An integral 80 Hz hi-pass filter provides easy switching from a flat frequency response to a low-end roll-off. The hi-pass position reduces mic sensitivity to “popping” in close vocal use and to handling noise. It also attenuates unwanted low-frequency ambient noise. Use of the supplied foam windscreen helps reduce wind and “popping” noise. Their housings are constructed of turned brass, rather than thin-wall aluminum. The surface is plated in black chrome for durability and low reflectivity. They operate on 48v DC phantom power. A compartmentalized protective carrying case accommodates the microphone, stand adapter, windscreen and two optional head capsules.

**MODULAR EXPANSION CAPABILITY**

AT-40 series microphones consist of two modular sub assemblies which are threaded together: the AT4900a-48 handle containing the mic’s electronics, and either the AT4049a-EL (omnidirectional), AT4051a-EL (cardioid) or the AT4053a-EL (hypercardioid) condenser head capsules. The head capsules may be easily removed, stored and replaced with an optional omnidirectional, cardioid or hypercardioid capsule to provide the widest range of miking capability.

The AT4049a-EL capsule provides the precision recording and audio measurement advantages of a flat, wide-response omnidirectional side pattern. The AT4051a-EL capsule provides the advantages of a smooth, wide-response cardioid pattern. The AT4053a-EL hypercardioid capsule offers excellent side rejection for increased working distance, and a highly uniform polar pattern that virtually eliminates off-axis coloration.
Small Diaphragm Cardioid Condenser Microphone

The AT-4041 is a pressure-gradient condenser microphone with a uniform cardioid polar pattern that is ideal for professional recording and broadcast applications. Very similar to the AT4051a except for interchangeable capsules. The AT-4041 features a transformerless output for low self-noise, high output and very high SPL handling capability (up to 145dB). The balanced output is direct-coupled, resulting in a clean signal even under high-output conditions.

Integral high-pass filter provides easy switching from a flat frequency response to a low-end roll-off. In addition to preventing the pickup of low-frequency ambient noise (such as air-conditioning) the high-pass filter may also be used to compensate for proximity effect in close-miking situations.

Use of the supplied foam windscreen further reduces wind and “popping” noise. Ruggedly built, the AT-4041 is housed in a case made of turned brass, not thin-wall aluminum. The surface is painted black for low reflectivity.

Compatible with any remote “phantom” or “simplex” power source supplying 48V DC.

AT-4071a/AT-4073a
Line + Gradient Condenser Microphones

The AT-4071a and AT4073a are transformerless line + gradient condenser microphones designed to meet the critical long-distance pickup demands of broadcasting, film/TV sound, professional recording and theater sound reinforcement. They feature a broad-band, linear on-axis frequency response, with maximum rejection of sounds from their sides and the rear. Rear polar lobing, common in shotgun microphones, is greatly reduced and their off-axis response remains highly uniform. The resulting lack of sound coloration on- and off-axis makes them particularly suited for miking dynamic action in film/TV audio as well as in “spot” miking techniques in the music studio or theater.

◆ The effective working distance of a directional mic is determined in great part by its polar pattern and the uniformity of its off-axis response. However, the S/N ratio also affects the usable miking distance. The distance may be less if the system S/N ratio is low because of low mic sensitivity or noisy electronics. The AT4071a and AT4073a provide extremely high output and a noise floor that is hardly measurable, much less audible. Use them with confidence in distant miking applications and even under the stringent demands of modern digital recording systems.

◆ They set new standards in small size and light weight. Overall length is 9.13” (AT4073a) and 15.55” (AT4071a) and at 4 and 5.5 oz. respectively, they add practically no noticeable weight to the end of a fish pole or the top of a minicam.

◆ The use of an advanced design, both the diaphragm and the side ports are exposed to the same acoustic environment. One result of this is that they are less sensitive to noise caused by wind turbulence or the “encounter” noise of panning action. And there is a marked reduction in proximity effect. Recordings made at varying distances remain more consistent in response, making both production and editing quicker, easier and less costly.

◆ They are exceptionally resistant to mechanical or handling noise. An integral 150 Hz hi-pass filter is available to “roll-off” the low-frequency response, thereby attenuating unwanted low-frequency ambient noise (such as air conditioning). The switch is recessed to prevent accidental activation. Built to withstand rigorous use in the field, they are powered with any remote “phantom” or “simplex” power source supplying from 11 to 52V DC.
Audio-Technica’s 30 Series offer all the advantages of high-quality microphones at an affordable price. They feature rugged construction and high performance specifications as well as AT’s legendary engineering and manufacturing technology. This provides an exceptional level of consistency from model to model, critical when any of the 30 Series are purchased in pairs. The 30 Series consists of four models: the AT3031 cardioid and AT3032 omnidirectional small-diaphragm condenser mics, the AT3035 large-diaphragm side-address cardioid condenser mic and the large-diaphragm AT3060 cardioid tube mic.

**AT3031 and AT3032**
The low-profile AT3031 and AT3032 condenser mics offer outstanding performance in critical recording applications. They have a frequency response of 30Hz to 20kHz; high SPL capability of 148 dB (158 dB with 10 dB pad); 48v phantom power; and a switchable roll-off (at 80 Hz. 12 dB/octave). The AT3031’s cardioid pattern reduces pickup of sounds from the sides and rear, improving isolation of desired sound source. The AT3032’s omnidirectional pattern provides maximum ambient pickup.

**AT3035**
The AT3035 is a precision-crafted, large-diaphragm condenser microphone that represents a value while offering all the performance of a high-quality studio microphone. Designed to provide versatility in the most demanding recording applications, the AT3035 has a fixed cardioid polar pattern and features excellent performance specifications, including:

- 20Hz-20kHz flat extended frequency response; SPL capability of 148 dB (158 dB with the 10dB pad); and an extremely low self-noise (12dB).
- Every aspect of the AT3035 has been tailored for a very smooth, natural sound while ensuring maximum accuracy, making it a perfect complement for today's digital recording equipment.
- To ensure optimum performance and isolation from noise and vibration, the AT3035 includes a professional shock mount. It uses 11-52v phantom power
- Switchable low-frequency roll-off (at 80 Hz, 12 dB/octave) reduces sensitivity to pops and the pickup of low-frequency ambient noise and mechanically-coupled vibrations.

<table>
<thead>
<tr>
<th>Element</th>
<th>AT4049a</th>
<th>AT4051a</th>
<th>AT4053a</th>
<th>AT4041</th>
<th>AT4071a</th>
<th>AT4073a</th>
<th>AT3031</th>
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<tr>
<td>Polar Pattern</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Line + Gradient</td>
<td>Line + Gradient</td>
<td>AT-3031:</td>
<td>AT-3035:</td>
<td>Condenser</td>
</tr>
<tr>
<td>Freq. Response</td>
<td>20 - 20kHz</td>
<td>20 - 20kHz</td>
<td>20 - 20kHz</td>
<td>20 - 20kHz</td>
<td>30 - 20kHz</td>
<td>30 - 20kHz</td>
<td>20 - 20kHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Circuit Sensitivity</td>
<td>-33dB (22.4 mV), ±2dB</td>
<td>-34dB (19.9 mV), ±2dB</td>
<td>-36dB (22.4 mV), ±2dB</td>
<td>-36dB (15.8 mV), ±2dB</td>
<td>-21dB (90.1 mV), ±1dB</td>
<td>-23dB (70.8 mV), ±1dB</td>
<td>-34dB (19.9 mV), ±1dB</td>
<td>-32dB (25.1 mV)</td>
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<td>100Ω</td>
<td>100Ω</td>
<td>100Ω</td>
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<td>Dynamic Range</td>
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<td>121 dB</td>
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<td>10dB pad</td>
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<td>12dB/oct @ 80Hz</td>
<td>12dB/oct @ 80Hz</td>
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<td>12dB/oct @ 150Hz</td>
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<td>4.2 oz</td>
<td>4.2 oz</td>
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<td>168.95 / 168.95</td>
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</table>
Live Performances Mics

Recent advances in the quality and sophistication of professional live-sound systems have been nothing short of revolutionary. Tours, clubs, broadcast events, corporate facilities and worship venues sound better than ever, utilizing better system design and better components in the audio chain. So Audio-Technica partnered with top touring companies, FOH and monitor engineers, audio consultants and artists - to learn what it takes to make the best-sounding, most reliable and consistent microphones for the live-sound industry. They listened carefully. Then they applied this knowledge to the creation of a high performance line — the Artist Elite Series.

AE 5400 Cardioid Condenser Mic
True condenser, large-diaphragm element design delivers pristine sound for the most discriminating vocalist. The AE5400 utilizes an aged, vapor-deposited gold diaphragm for a flat frequency response with improved dynamic range and easily handles high SPLs. Featuring a robust design to combat the rigors of the road, the mic also has a switchable 80Hz high-pass filter and a 10dB pad. It also provides excellent natural vocals with off-axis response that is linear and uniform across the entire frequency range. To ensure optimum performance, the AE5400 features anti-shock engineering for superior isolation from noise and vibration, a multi-level windscreen design, and includes AT's AT8470 Quiet-Flex stand clamp.

AE 3000 Cardioid Condenser Mic
Offers exceptional performance for venues ranging from the largest arenas to the most intimate club settings. Featuring a well-tempered cardioid polar pattern with outstanding rejection qualities, the AE3000 provides exacting detail, brilliant clarity and uncolored realism. Has a switchable 80Hz high-pass filter and 10dB pad, superior anti-shock engineering, multi-level windscreen and includes the AT8470 stand clamp.

AE 6100/AE 4100 Hypercardioid and Cardioid Dynamic Mics
The AE6100 delivers clean articulation for great on-stage presence and excellent monitor cut. The AE4100 provides focused vocal pickup while offering superior gain-before-feedback. AT tailored the performance of the AE4100 for a more aggressive sound quality that keeps the vocals up-front in the mix. Both mics have superior anti-shock engineering for low handling noise and include the AT8470 Quiet-Flex stand clamp.

The Artist Elite Series instrument mics combine robustness, versatility and consistent performance night after night in the most demanding areas of live sound instrument miking. They have an integral 80 Hz high-pass filter switch, 10 dB pad and include the new AT8471 isolation clamp. The AE5100 is a large-diaphragm end-fire cardioid condenser; the AE3000 is a large-diaphragm side-address cardioid condenser; and the revolutionary AE2500, a combination condenser/dynamic model, is the ultimate mic for kick drums.

AE5100
AE2500
AE3000

The AE5100 is a live-sound instrument mic designed for drum overheads and percussion, acoustic guitar, strings and other acoustic instruments. The large diaphragm delivers a natural sound with accurate response, while the end-fire design allows it to be placed where other large diaphragm mics are unable to go.

The AE3000 is designed to take the highest sound pressure levels encountered on stage from sources such as guitar cabinets, toms, snare, tympani and overheads while still delivering uncolored performance, thanks to an open-architecture headcase and large-diaphragm condenser capsule. The mic features a small-format side-address design with tapered grille for optimum placement versatility.

The AE2500 features a revolutionary dual-element design that combines condenser and dynamic capsules within a single housing and positioned in a perfect phase relationship - nearly impossible to accomplish with separate microphones. Ideal for kick/bass drum applications, the mic will survive extreme SPLs while providing uncompromising audio quality. The AE2500’s dynamic element cleanly captures the attack transients of the beater, while the condenser element renders the internal tonalities of the shell and the instrument as a whole.
Great stage and studio sound starts with the microphone. Today, more musicians and sound engineers find that their best sound starts with Artist Series microphones. The wide range of condenser mics is ideal for both studio and sound reinforcement applications. Unique, specialized models solve the most difficult pickup problems with innovative engineering and ultra-precise manufacturing. In addition, a select group of rugged Artist Series dynamic microphones are the first choice of many touring musicians as well as major recording studios. Carefully tailored response assures effective sound reinforcement. Every Artist Series microphone has withstood the close scrutiny of industry professionals in extensive field testing. Each also benefits from some of the most rigorous production testing available anywhere in the world.

**ATM10a**
Omnidirectional condenser microphone for vocal/instrumental use when maximum ambient pickup is desired. Excellent for hi-hat, strings, guitar and piano. Extremely smooth extended response on and off axis. Low sensitivity to popping and overload. Internal AA battery or phantom power operation ..........136.50

**ATM31a**
Cardioid condenser microphone for general studio/stage use. Has wide frequency response, and added warmth when used close up. Large protective screen. Excellent for close-up vocals, piano, reeds and brass. Low-mass diaphragm ensures minimum distortion. Sound is similar to far more expensive studio microphones. Operates on internal AA battery or 9-52v phantom power .............................................................................162.50

**ATM33a**
Cardioid condenser microphone for more critical studio/stage use. Has outstanding linearity both on and off axis, high SPL capability, wide frequency response and low-mass diaphragm. Provides balanced sound for strings and solo vocals, plus crisp reproduction of pianos, reeds, brass and drums. Internal AA battery or phantom power operation ......188.50

**ATM89R**
Hypercardioid condenser microphone delivers smooth, accurate vocal reproduction for studio-quality sound on stage. Special internal shock mounting eliminates virtually all handling and cable noise. Accepts interchangeable elements for a variety of polar patterns available in cardioid, subcardioid and omni. Features high sensitivity and SPL capability with a rugged design for reliable performance. Operates on 48v phantom power.................................................................206.50

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<thead>
<tr>
<th>Element</th>
<th>ATM10a</th>
<th>ATM31a</th>
<th>ATM33a</th>
<th>ATM89R</th>
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<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>20 - 18k Hz</td>
<td>30 - 20k Hz</td>
<td>30 - 20k Hz</td>
<td>70 - 20k Hz</td>
</tr>
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<td>Open Circuit Sensitivity</td>
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<td>-44 dB (6.3 mV)</td>
<td>-44 dB (6.3 mV)</td>
<td>-42 dB (7.9 mV)</td>
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<td>200 Ω / 270 Ω</td>
<td>200 Ω / 270 Ω</td>
<td>100 Ω</td>
</tr>
<tr>
<td>Maximum SPL Input²</td>
<td>137 dB</td>
<td>137 dB</td>
<td>137 dB</td>
<td>138 dB</td>
</tr>
<tr>
<td>Signal to Noise Ratio³</td>
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<td>70 dB</td>
<td>70 dB</td>
<td>67 dB</td>
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<tr>
<td>Dynamic Range (Typical)²</td>
<td>113 dB</td>
<td>113 dB</td>
<td>113 dB</td>
<td>111 dB</td>
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<tr>
<td>Phantom Power</td>
<td>9 - 52V DC</td>
<td>9 - 52V DC</td>
<td>9 - 52V DC</td>
<td>48V DC</td>
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<tr>
<td>Battery Type</td>
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<td>1.5V AA</td>
<td>1.5V AA</td>
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<td>7.1 oz (200 g)</td>
<td>5.3 oz (150g)</td>
<td>10.2 oz (290 g)</td>
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</tbody>
</table>

1. re 1V at 1 Pa  
2. 1kHz @ 1Pa  
3. 1 kHz @ Max SPL  

**www.bhphotovideo.com**
SPECIAL PURPOSE CONDENSER MICROPHONES

ATM73a
Headworn cardioid condenser microphone ideal for drummers, keyboardists or anyone who needs to keep their hands free. Unobtrusive headband. Flexible mic boom. Belt-mounted power. Includes battery and windscreen.

ATM 79ac: Same as ATM 73a less battery/remote power module. Unterminated for wireless and custom applications ................................................................. 181.95

ATM73cW: Same as ATM 73a less battery/remote power module. Terminated for use with Audio-Technica professional wireless systems.............................................. 109.95

ATM75
Headworn cardioid condenser microphone provides superior vocal performance with hands-free operation. Pivot-mounted flexible mic boom descends from left or right side of comfortable, secure headband. Moisture-resistant protective coating on headband and boom. Belt-mounted power module. Includes battery and windscreen.

ATM 75c: Same as ATM 75 less battery/remote power module. Unterminated for wireless and custom applications ................................................................. 142.95

ATM75cW: Same as ATM 75 less battery/remote power module. Terminated for use with Audio-Technica professional wireless systems .............................................. 76.95

<table>
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<th>Element</th>
<th>ATM35</th>
<th>ATM87R</th>
<th>ATM73a</th>
<th>ATM75</th>
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<td>Condenser</td>
<td>Condenser</td>
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<td>Polar Pattern</td>
<td>Unidirectional</td>
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<td>Condenser</td>
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<td>60 - 15kHz</td>
<td>60 - 15kHz</td>
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<td>Open Circuit Sensitivity</td>
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<td>-36 dB (15.8 mV)</td>
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<td>-51 dB (2.8 mV)</td>
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<td>100 Ω</td>
<td>200 Ω</td>
<td>200 Ω</td>
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<td>Maximum SPL Input</td>
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<td>151 dB</td>
<td>135 dB</td>
<td>132 dB</td>
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<td>Signal to Noise Ratio</td>
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<td>123 dB</td>
<td>101 dB</td>
<td>96 dB</td>
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<td>Phantom Power</td>
<td>11 - 52V DC</td>
<td>48V DC</td>
<td>5 - 52V DC</td>
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HEADWORN CONDENSER MICROPHONES

ATM35
High-intensity cardioid condenser microphone includes unique UniMount that attaches directly to brass or reed instruments. Ideal for active active stage performances. UniMount foam windscreen holds microphone for accurate positioning while protecting element. Also clips to piano, string bass, or to drum kit hardware for clean reproduction of toms and snares. Crisp, clear, well-balanced response, even at high SPLs................................. 222.50

ATM73a
Same as ATM 73a less battery/remote power module. Unterminated for wireless and custom applications 181.95

ATM73cW: Same as ATM 73a less battery/remote power module. Terminated for use with Audio-Technica professional wireless systems 109.95

ATM87R
A high SPL cardioid condenser boundary microphone, the ATM 87R excels in picking up highly dynamic instruments such as kick drum, piano, etc. Low-profile design is ideal for applications requiring minimum visibility. Heavy die-cast case and rubber non-slip bottom pad minimize mechanical coupling of surface vibrations to the microphone, while low-roll-off switch helps control undesired ambient noise. Operates on 48V DC phantom power. A 25-ft. cable with TA3F and XLRM-type connectors is included 194.50
**ARTIST SERIES - Hi-Energy Studio/Stage Dynamic Mics**

These dynamic handheld and instrument mics feature Hi-Energy neodymium magnets and low-mass, copper-clad aluminum wire voicecoils to offer high SPL output capabilities with exceptional output sensitivity.

**ATM23HE**

Hypercardioid instrument microphone combines excellent performance characteristics and rugged dependability for superior results on snare drum, as well as other highly dynamic instruments such as floor and rack toms, piano and electric guitar cabinets. Low profile design permits versatile placement around drum kit hardware. **152.95**

**ATM27HE**

This handheld hypercardioid microphone offers superb value and outstanding performance for vocal applications. The double-dome diaphragm, low-mass voice coil and close-tolerance neodymium magnet structure provide crisp high-frequency performance. The element is double-isolated to greatly reduce handling noise. **89.95**

**ATM29HE**

Designed for instrumental pickup and general stage use, this hypercardioid microphone is a versatile live-sound producer. Low-mass voice coil and neodymium magnet structure ensure excellent transient response. Double-dome diaphragm captures acoustic and electronic instrument sound with accuracy and ease. Double-isolation of the element assures low mechanical noise. **84.95**

**ATM41HE**

This handheld hypercardioid mic, designed for close-up vocals, features excellent off-axis rejection for minimizing feedback and a tailored response that provides natural, full-range sound reproduction. Patented floating diaphragm reduces handling noise. **129.95**

**ATM61HE**

A hypercardioid vocal microphone that utilizes a unique high-output element and an advanced, ultra-precise diaphragm that extends response and reduces coloration of off-axis sounds — similar to much more expensive stage condenser mic’s. Patented floating diaphragm reduces handling noise. Offers excellent gain before feedback and best stage presence. **148.95**

**ATM61HE/S**

Same as above with an integral on/off switch and non-removable grille. **149.95**

**ATM63HE**

Close-working hypercardioid microphone for both vocal and instrumental pickup. Extended frequency response is ideal for pickup of toms, snares, electric guitar and piano with excellent isolation and peak-free response. Wide-range uniform polar pattern ensures natural, balanced pickup both on and off axis. Extremely rugged with all-metal grille. **119.95**

**ATM25**

Rugged dynamic hypercardioid microphone responds cleanly in high SPL environments. Big, warm low-frequency response with excellent presence is ideal for close-up vocals and dialog as well as kick drums, toms, acoustic bass, piano or any high-output low-frequency instrument. **178.95**

**ATM41a**

Close-working, field-proven rugged dynamic cardioid microphone sets a high standard for handheld vocal use. Also useful for pickup or amplified instrument speaker output. Comfortable shape and good balance is helpful during extended sets. Excellent off-axis rejection for minimum feedback. **69.95**

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**artist series • dynamic mics**

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<tr>
<th>Element</th>
<th>ATM 23HE</th>
<th>ATM 27HE</th>
<th>ATM 29HE</th>
<th>ATM 41HE</th>
<th>ATM 61HE</th>
<th>ATM 63HE</th>
<th>ATM 25</th>
<th>ATM 41a</th>
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<td>Neodymium Magnet</td>
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<td>☀️</td>
<td>☀️</td>
<td>☀️</td>
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<td>50 - 17k Hz</td>
<td>50 - 17k Hz</td>
<td>50 - 18k Hz</td>
<td>50 - 18k Hz</td>
<td>50 - 18k Hz</td>
<td>30 - 15k Hz</td>
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<td>-56 dB (1.5 mV)</td>
<td>-51 dB (2.8 mV)</td>
<td>-51 dB (2.8 mV)</td>
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<td>9.3 oz (265 g)</td>
<td>13.8 oz (390 g)</td>
<td>11.6 oz (328 g)</td>
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</tbody>
</table>

1 re 1V at 1 Pa
Hard-Rockin’ Cardioid Microphones

With their cardioid pickup pattern, the MB1000, MB2000 and MB3000 (Dynamic) and MB4000 (Condenser) mics reduce unwanted background noise and control feedback, especially when used extremely close. Mic ing instruments or vocalists at very close range also effectively reduces “leakage” from one performer to the next. Low-frequency noise is also reduced by a low-frequency roll-off of sounds more than one foot away from the microphone. Enclosed in a rugged die-cast housing, they feature a special, baked-on “Midnight Blues” finish. In addition to being attractive and comfortable to hold, this special finish further reduces handling noise and increases durability.

A multi-stage windscreen reduces wind noise and “popping” when performers work extremely close. The supplied microphone clamp permits mounting on any mic stand with 5/8” - 27 threads.

**MB1000L and MB1000H**

Available in low-and high-impedance versions, the MB1000L and MB1000H are wide-range dynamic mics designed specifically for close-up vocal and instrumental use. A special internal shock mount system minimizes handling and case noise. The microphone also features the MagnaLock on/off switch for silent operation. The switch may be locked in the “on” position to prevent accidental turnoff during use. High-output Neodymium design and low-mass diaphragm and voice coil assure excellent signal-to-noise ratios with mic mixers, tape recorders, and other electronic inputs. The MB1000 is capable of undistorted output even in very intense sound fields.

**MB2000L**

Like the MB1000L, the MB2000L is designed for close-up vocal and instrumental use. Crisp high-frequency response and extended low-frequency response makes it an ideal choice for lifelike instrument pickup. The MB2000L also adds a foam-lined carrying case to protect the mic during transport and storage.

**MB3000L**

The MB3000L is specifically designed for use in high-quality recording and sound reinforcement applications to meet the needs of professional musicians and engineers. Extended frequency response, high sensitivity and extremely fast transient response make the mic ideal for high-quality vocal and instrumental pickup as well. Includes a foam-lined carrying case.

**MB4000C**

The MB4000C is a wide-range condenser microphone designed for professional musicians and sound engineers in live performance, recording and sound reinforcement applications. Smooth response fast attack and quiet operation ensure high-quality vocal and instrumental pickup. The MB4000C is powered by a 1.5V AA battery or 9 - 48V DC phantom power. Includes a foam-lined carrying case.

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**Audio-Technica Midnight Blue Series**

**MB1000L**

- **Element:** Neodymium Dynamic
- **Polar Pattern:**
- **Frequency Response:** 70 - 15k Hz
- **Open Circuit Sensitivity:** -49 dB (3.5 mV)
- **Impedance:** 500 Ω
- **Maximum SPL Input:** 128 dB
- **Signal to Noise Ratio:** 66 dB
- **Dynamic Range (Typical):** 100 dB
- **Phantom Power (2.0mA Typical):** 9 - 48V DC
- **Battery Type:** 1.5V AA
- **Battery Current/Life (Typical):** 1 mA/1000 hrs.
- **Weight:** 9.3 oz (264 g)

**MB2000L**

- **Element:** Neodymium Dynamic
- **Polar Pattern:**
- **Frequency Response:** 70 - 15k Hz
- **Open Circuit Sensitivity:** -38 dB (12.5 mV)
- **Impedance:** 10,000 Ω
- **Maximum SPL Input:** 128 dB
- **Signal to Noise Ratio:** 66 dB
- **Dynamic Range (Typical):** 100 dB
- **Phantom Power (2.0mA Typical):** 9 - 48V DC
- **Battery Type:** 1.5V AA
- **Battery Current/Life (Typical):** 1 mA/1000 hrs.
- **Weight:** 9.6 oz (272 g)

**MB3000L**

- **Element:** Neodymium Dynamic
- **Polar Pattern:**
- **Frequency Response:** 60 - 15k Hz
- **Open Circuit Sensitivity:** -49 dB (3.5 mV)
- **Impedance:** 500 Ω
- **Maximum SPL Input:** 128 dB
- **Signal to Noise Ratio:** 66 dB
- **Dynamic Range (Typical):** 100 dB
- **Phantom Power (2.0mA Typical):** 9 - 48V DC
- **Battery Type:** 1.5V AA
- **Battery Current/Life (Typical):** 1 mA/1000 hrs.
- **Weight:** 8.6 oz (244 g)

**MB4000C**

- **Element:** Condenser
- **Polar Pattern:**
- **Frequency Response:** 100 - 18k Hz
- **Open Circuit Sensitivity:** -48 dB (3.9 mV)
- **Impedance:** 200 Ω
- **Maximum SPL Input:** 128 dB
- **Signal to Noise Ratio:** 66 dB
- **Dynamic Range (Typical):** 100 dB
- **Phantom Power (2.0mA Typical):** 9 - 48V DC
- **Battery Type:** 1.5V AA
- **Battery Current/Life (Typical):** 1 mA/1000 hrs.
- **Weight:** 4.7 oz (132 g)
Miniature Condenser Microphones

Designed to be worn on the clothing of performers, Audio-Technica’s miniature condenser microphones provide excellent yet unobtrusive sound pickup. Their mic element is enclosed in a rugged housing with low-reflectance finish and internal construction minimizes handling and clothing noise. The wide-range capability of these mics ensure clean, accurate reproduction with high intelligibility for lecturers, singers, stage and TV performers, as well as musical instruments.

<table>
<thead>
<tr>
<th>Element</th>
<th>AT-803b</th>
<th>AT-831b</th>
<th>AT-831R</th>
<th>MT830R</th>
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<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
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<td>30Hz - 20kHz</td>
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<td>Open Circuit Sensitivity (Phantom/Battery)</td>
<td>-45 dB (5.6 mV)/-46 dB (5.0 mV)</td>
<td>-44 dB (6.3 mV)/-45 dB (5.6 mV)</td>
<td>-42 dB (7.9 mV)/-34 dB (19.9 mV)</td>
<td></td>
</tr>
<tr>
<td>Maximum SPL Input (Phantom/Battery)</td>
<td>135 dB / 121 dB</td>
<td>135 dB / 121 dB</td>
<td>141 dB</td>
<td>131 dB</td>
</tr>
<tr>
<td>Dynamic Range-Typical (Phantom/Battery)</td>
<td>106 dB/92dB</td>
<td>106 dB/92dB</td>
<td>112 dB</td>
<td>107 dB</td>
</tr>
<tr>
<td>Phantom Power</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
</tr>
<tr>
<td>Battery Type</td>
<td>1.5V AA</td>
<td>1.5V AA</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Low-Frequency Roll-off</td>
<td>18dB/oct @ 150 Hz</td>
<td>18dB/oct @ 80 Hz</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Price</td>
<td>$139.95</td>
<td>$149.95</td>
<td>$174.95</td>
<td>$155.95</td>
</tr>
</tbody>
</table>

**AT803b**

**Omnidirectional Condenser Microphone**

The AT803b provides excellent yet unobtrusive sound pickup. The wide-range capability of the AT803b ensures clean, accurate reproduction with high intelligibility for lecturers, singers, stage and TV performers.

- Powered by AA battery (up to 1200 hours) or 9-52v phantom power
- 6´ (1.8 m) cable is provided between the mic and power module
- A built-in 3-position switch on the power module allows selection of off/on/flat response, or on/low-roll-off
- Includes AT8417 clothing clip, AT8116 windscreen and carrying case

**MT830R**

**Subminiature Omnidirectional Condenser Mic**

The MT830R’s wide-range capability ensures clean, accurate reproduction with high intelligibility for lecturers, singers, stage and TV performers, as well as instruments. Runs on 9-52v phantom power only.

- 25´ cable is provided between the mic and power module
- Includes AT8417 clothing clip and AT8130 windscreen

**AT831b/AT831R**

**Cardioid Condenser Microphone**

Cardioid versions of the AT803b, the miniature AT831b and AT831R (phantom power only) are designed for hands-free applications in sound reinforcement systems, and for use by musicians, especially for pickup of acoustic guitar. Cardioid pattern provides improved gain before feedback. Close-up voice and instrument pickup are crisp and clean, yet full sounding. Suppression of background noise is significantly better than that of full-size microphones. Same features and accessories as the AT803b plus they adds the AT8444 guitar adapter.

**New! AT899**

**Subminiature Omnidirectional Condenser Mic**

Designed for high-quality, unobtrusive operation, the AT899 provides maximum intelligibility and clean, accurate reproduction for vocalists, lecturers, stage and television talent, and houses of worship. A mere 5mm in diameter the AT899 is ideal for applications requiring minimum visibility. The omni element is enclosed in a rugged, low-profile housing to minimize handling and wind noise. Supplied accessory kit includes single and double mounts, clothing clip, viper clip, magnetic clip, two open-pore foam windscreens, and two metal mesh element covers to protect the condenser element from moisture, makeup, and other contaminants. Also includes a convenient carrying case to hold the microphone and accessories.

Available in four terminations and two colors (low-reflection black or “theater” beige)

**AT899:** Wired model with TA3F connection to the supplied AT8537 battery/phantom power module. The module features battery/phantom power operation, low-frequency roll-off switch, and an XLR3M connector supplying a low-impedance balanced output.

**AT899cW:** 55´ cable terminated with professional 4-pin locking connector for use with AT’s UniPak wireless transmitters

**AT899cT5:** 55´ cable terminated with 5-pin connector for ATW-U101 wireless body-pack systems

**AT899c:** 55´ cable unterminated for custom applications
Boundary Condenser Microphones

Audio-Technica's wide range boundary condenser microphones are designed for surface-mounted applications such as high-quality sound reinforcement, professional recording and conferencing, television, and other demanding sound pickup situations. Their small size makes them ideal for use in applications where minimum visibility is required. Available in omnidirectional (half space) or hemi-cardioid (half-space cardioid) polar patterns, the microphones are enclosed in a rugged die-cast case and protected by two layers of perforated steel. The combination of heavy die-cast case and rubber non-slip bottom pad minimizes mechanical coupling of surface vibrations to the microphone.

**AT841a Omnidirectional (Half Space) Mic**
- 25’ cable with TA3F-type connectors for use between the microphone and the AT8531 power module is provided
- Built-in 3-position switch on the power module allows selection of off, on/flat response or on/low-roll-off
- Powered by a AA battery (1200 hrs) or 9-52V phantom power

**AT851a Hemi-Cardioid Mic**
- 25’ cable with TA3F-type connectors for use between the microphone and the AT8531 power module is provided
- Built-in 3-position switch on the power module allows selection of off, on/flat response or on/low-roll-off
- Powered by a AA battery (1200 hrs) or 9-52V phantom power

**AT891R Hemi-Cardioid Mic with Programmable Switch**
- Programmable three mode touch-sensitive on/off switch: touch-on/touch-off, touch-to-talk (momentary on) and touch-to-mute (momentary off)
- Red LED on the unit indicates when the microphone is “on.”
- Powered from any external 11-52V DC phantom power supply

**AT851RX Hemi-Cardioid Mic**
- Requires 9V to 52V DC phantom power
- Recessed switch in the power module permits choice of flat response or low-frequency roll-off to help control undesired ambient noise
- Includes 25’ miniature cable with a TA3F plug for connecting to the microphone
- Output end connects to the provided AT8533x power module via internal solderless screw terminals for simple cable-length adjustment in the field

**AT871R Hemi-Cardioid Mic**
- Requires 9V to 52V DC phantom power
- A 25’ (7.6 m) cable is provided with TA3F and XLRM-type connectors for use between the microphone and electronics input

---

**Specifications Table**

<table>
<thead>
<tr>
<th></th>
<th>AT841a</th>
<th>AT851a</th>
<th>AT851RX</th>
<th>AT871R</th>
<th>AT891R</th>
</tr>
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<tbody>
<tr>
<td>Polar Pattern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>30 - 20 kHz</td>
<td>30 - 20 kHz</td>
<td>30 - 20 kHz</td>
<td>30 - 20 kHz</td>
<td>30 - 20 kHz</td>
</tr>
<tr>
<td>Open Circuit Sensitivity (Phantom/Battery)</td>
<td>-42 dB (7.9 mV) / -44 dB (6.3 mV)</td>
<td>-44 dB (6.3 mV) / -45 dB (5.6 mV)</td>
<td>-43 dB (7.0 mV)</td>
<td>-33 dB (22.4 mV)</td>
<td>-33 dB (22.4 mV)</td>
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<tr>
<td>Impedance (Phantom/Battery)</td>
<td>200 Ω / 270 Ω</td>
<td>200 Ω / 270 Ω</td>
<td>200 Ω</td>
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<td>200 Ω</td>
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<tr>
<td>Maximum SPL Input (Phantom/Battery)</td>
<td>133 dB SPL / 119 dB SPL</td>
<td>135 dB SPL / 121 dB SPL</td>
<td>138 dB SPL</td>
<td>130 dB SPL</td>
<td>123 dB SPL</td>
</tr>
<tr>
<td>Signal to Noise Ratio</td>
<td>65 dB</td>
<td>67 dB</td>
<td>67 dB</td>
<td>67 dB</td>
<td>64 dB</td>
</tr>
<tr>
<td>Dynamic Range-Typical (Phantom/Battery)</td>
<td>104 dB/90dB</td>
<td>108 dB/94dB</td>
<td>111 dB</td>
<td>103 dB</td>
<td>93 dB</td>
</tr>
<tr>
<td>Phantom Power (2.0mA Typical)</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
<td>11 - 52V</td>
</tr>
<tr>
<td>Battery Type</td>
<td>1.5V AA (up to 1200 hrs)</td>
<td>1.5V AA (up to 1200 hrs)</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Low-Frequency Roll-off</td>
<td>18dB/oct @ 80 Hz</td>
<td>18dB/oct @ 80 Hz</td>
<td>6dB/oct @ 150 Hz</td>
<td>–</td>
<td>18dB/oct @ 80 Hz</td>
</tr>
</tbody>
</table>

1. 1 V at 1% T.H.D. 2. 1 kHz at 1% T.H.D. 3. 1 kHz at 1 Pa 4. 1 kHz at Max SPL
Hanging Condenser Microphones

Audio-Technica's wide-range of miniature cardioid condenser hanging microphones are designed for use in high-quality sound reinforcement, professional recording, television, and other demanding sound pickup applications. They are furnished with a vinyl-coated steel hanger that allows them to be positioned inconspicuously over a choir, orchestra, stage, etc., for very low-profile situations. Supplied as cardioid mics, they also accept easily interchangeable elements to permit selection of angle of acceptance from 100° to 360°. They all include an AT 8102 windscreens, AT 8451 steel hangar, power module, and a permanently attached 25´ cable. Elements are enclosed in either a low-reflectance black finish or a white-finished housing, cable and steel hanger.

**AT853a**
- Powered by a single AA battery for up to 1200 hours or 9-52V DC phantom power
- Built-in 3-position switch on the power module allows selection of off, on/flat response, or on/low-roll-off
- Roll-off is 18 dB/octave at 80 Hz
- 25´ permanently-attached cable to mic with TA3F connector at power module. Module output is XLRM-type

<table>
<thead>
<tr>
<th>Finish</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>197.50</td>
</tr>
<tr>
<td>White</td>
<td>227.95</td>
</tr>
</tbody>
</table>

**AT853PMx**
- Accepts 9-52V DC phantom power
- Roll-off of 6 dB/octave at 150 Hz is enabled by cutting jumper on PC board
- 25´ cable may be cut to any length and connected to screw terminals on the supplied wall/ceiling plate power module
- Power module features a white-finished standard electrical cover plate for easy, secure installation. Output is low impedance balanced via screw terminals

<table>
<thead>
<tr>
<th>Finish</th>
<th>Price</th>
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</thead>
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<tr>
<td>Black</td>
<td>179.50</td>
</tr>
<tr>
<td>White</td>
<td>204.95</td>
</tr>
</tbody>
</table>

**AT853Rx**
- Accepts 9-52V DC phantom power
- Recessed switch in the power module permits choice of flat response, or a low-frequency roll-off of 6 dB/octave at 150 Hz
- 25´ cable connects to the power module via internal solderless screw terminals for simple length adjustment in the field. Module output is XLRM-type

<table>
<thead>
<tr>
<th>Finish</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>186.50</td>
</tr>
<tr>
<td>White</td>
<td>213.50</td>
</tr>
</tbody>
</table>

**AT859b Miniature Interview Mic**
- Elegant, long and slender (16”) handheld interview mic
- Cardioid condenser element
- Response is specifically tailored for crisp speech
- Battery or phantom power
- Includes stand clamp........... 197.95

**AT853H-ELE Hypercardioid**
- Supplied with AT873R. Increases directionality to provide better gain-before-feedback or reduction of background noise over other patterns. 100° pickup

<table>
<thead>
<tr>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.50</td>
</tr>
</tbody>
</table>

**AT853O-ELE Omnidirectional**
- Allows operation in all directions with a 360° pickup pattern

<table>
<thead>
<tr>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.50</td>
</tr>
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**AT853SC-ELE Subcardioid**
- Allows a wide 170° frontal working area than a standard cardioid

<table>
<thead>
<tr>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.50</td>
</tr>
</tbody>
</table>

**AT873R Handheld Hypercardioid Condenser Mic**
- Relatively small vocal mic well suited for lectern and stand applications
- Superior internal shock mounting eliminates handling and cable noise
- Balanced low impedance output
- Easily accepts optional interchangeable elements
- Requires 48V phantom power
- Rugged housing; low-reflectance black finish

<table>
<thead>
<tr>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>174.95</td>
</tr>
</tbody>
</table>

**AT853C-ELE Cardioid**
- Supplied with AT851, AT853, AT857 and AT871. 120° frontal pickup pattern

<table>
<thead>
<tr>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.50</td>
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</tbody>
</table>

**AT8530-ELE Omnidirectional**
- Allows operation in all directions with a 360° pickup pattern

<table>
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<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.50</td>
</tr>
</tbody>
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**AT853SC-ELE Subcardioid**
- Allows a wide 170° frontal working area than a standard cardioid

<table>
<thead>
<tr>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.50</td>
</tr>
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</table>
Gooseneck Condenser Microphones

Audio-Technica’s gooseneck wide-range condenser microphones are designed for quality sound reinforcement, professional recording, television, and other demanding sound pickup applications. Standing at either 12 or 19” above the mounting surface, their small-diameter alternating gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured appearance. Microphone elements are enclosed in a rugged housing with a low-reflectance black finish. Supplied as cardioid microphones, all except the AT859QMLx accept easily interchangeable elements for selection of angle of acceptance from 100° to 360°. Switchable low frequency roll-off filters minimize background ambiance, air conditioning rumble and mechanical noise, ensuring the highest sound quality, even under adverse conditions.

<table>
<thead>
<tr>
<th>Model</th>
<th>Polar Pattern</th>
<th>Frequency Response</th>
<th>Open Circuit Sensitivity Phantom</th>
<th>Impedance (Phantom/Battery)</th>
<th>Maximum SPL Input</th>
<th>Signal to Noise Ratio</th>
<th>Dynamic Range-Typical</th>
<th>Phantom Power</th>
<th>Battery Type</th>
<th>Battery Current/Life (Typical)</th>
<th>Low-Frequency Roll-off</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-857AMa</td>
<td>30 - 20k Hz</td>
<td>-44 dB (6.3mV)</td>
<td>200Ω</td>
<td>135 dB/121 dB</td>
<td>67 dB</td>
<td>67 dB</td>
<td>108 dB/94dB</td>
<td>9 - 52V</td>
<td>1.5V AA</td>
<td>0.4 mA</td>
<td>18dB/oct @ 80 Hz</td>
</tr>
<tr>
<td>AT-857AMx</td>
<td>30 - 20k Hz</td>
<td>-43 dB (7.0mV)</td>
<td>200Ω</td>
<td>138 dB</td>
<td>67 dB</td>
<td>67 dB</td>
<td>111 dB</td>
<td>9 - 52V</td>
<td>—</td>
<td>—</td>
<td>6dB/oct @ 150 Hz</td>
</tr>
<tr>
<td>AT-857QMa</td>
<td>30-20k Hz</td>
<td>-46 dB (5.0mV)</td>
<td>200Ω</td>
<td>139 dB SPL</td>
<td>65 dB</td>
<td>65 dB</td>
<td>112 dB</td>
<td>9 - 52V</td>
<td>1.5V AA</td>
<td>0.4 mA</td>
<td>18dB/oct @ 80 Hz</td>
</tr>
<tr>
<td>AT-857QMLx</td>
<td>50-18k Hz</td>
<td>-46 dB (5.0mV)</td>
<td>200Ω / 270Ω</td>
<td>140 dB SPL</td>
<td>67 dB</td>
<td>67 dB</td>
<td>111 dB</td>
<td>9 - 52V</td>
<td>1.5V AA</td>
<td>0.4 mA</td>
<td>6dB/oct @ 150 Hz</td>
</tr>
<tr>
<td>AT-853a</td>
<td>30 - 20k Hz</td>
<td>-33 dB (22.4mV)</td>
<td>200Ω / 270Ω</td>
<td>135 dB / 121 dB</td>
<td>67 dB</td>
<td>67 dB</td>
<td>108 dB/94dB</td>
<td>9 - 52V</td>
<td>1.5V AA</td>
<td>0.4 mA</td>
<td>18dB/oct @ 80 Hz</td>
</tr>
<tr>
<td>AT-853PMx</td>
<td>30 - 20k Hz</td>
<td>-43 dB (7.0mV)</td>
<td>200Ω</td>
<td>130 dB</td>
<td>67 dB</td>
<td>67 dB</td>
<td>111 dB</td>
<td>9 - 52V</td>
<td>1.5V AA</td>
<td>0.4 mA</td>
<td>6dB/oct @ 150 Hz</td>
</tr>
<tr>
<td>AT-853Rx</td>
<td>30 - 20k Hz</td>
<td>-33 dB (22.4mV)</td>
<td>200Ω</td>
<td>138 dB</td>
<td>67 dB</td>
<td>67 dB</td>
<td>111 dB</td>
<td>9 - 52V</td>
<td>1.5V AA</td>
<td>0.4 mA</td>
<td>6dB/oct @ 150 Hz</td>
</tr>
</tbody>
</table>

**AT857AMa/AT857AMLa**
- Built-in 3-position switch on the power module allows selection of off, on/flat response, or on/low-roll-off
- 9.8’ permanently-attached cable to mic with TA3F connector at power module. Module output is XLRM-type
- A 5/8”-27 threaded flange allows the microphone to mate with the threads of a standard mic stand and can be permanently mounted using the included 5/8” - 27 threaded stud.

**AT857AMx/AT857AMLx**
- A quick-mount version of the AT857AM a, the mic can be instantly installed and removed. 3-pin XLR-M connector insert at the base allows the AT857QMa to be plugged directly into any XLRF-type surface or cable connector
- Recessed switch in the power module permits choice of flat response or a low-frequency roll-off of 6 dB/octave at 150 Hz

**AT857QMa/AT857QMLa**
- A quick-mount version of the AT857AM x, the mic can be instantly installed and removed. 3-pin XLRM connector insert at the base allows the AT857QMa to be plugged directly into any XLRF-type surface or cable connector
- Recessed switch in the power module permits choice of flat response or a low-frequency roll-off of 6 dB/octave at 150 Hz

**AT859QMLx**
- Quick-mounting, the AT859QMLx has a 3-pin XLR-M connector insert at the base allowing it to be instantly installed and removed. Plugs directly into any XLRF-type surface or cable connector
- Recessed switch in the power module permits choice of flat response, or a low-frequency roll-off of 6 dB/octave at 150 Hz

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**Audio-Technica’s UniPoint Series**

**Gooseneck Condenser Microphones**

Audio-Technica's gooseneck wide-range condenser microphones are designed for quality sound reinforcement, professional recording, television, and other demanding sound pickup applications. Standing at either 12 or 19” above the mounting surface, their small-diameter alternating gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured appearance. Microphone elements are enclosed in a rugged housing with a low-reflectance black finish. Supplied as cardioid microphones, all except the AT859QMLx accept easily interchangeable elements for selection of angle of acceptance from 100° to 360°. Switchable low frequency roll-off filters minimize background ambiance, air conditioning rumble and mechanical noise, ensuring the highest sound quality, even under adverse conditions.

**AT857AMa/AT857AMLa**
- Built-in 3-position switch on the power module allows selection of off, on/flat response, or on/low-roll-off
- 9.8’ permanently-attached cable to mic with TA3F connector at power module. Module output is XLRM-type
- A 5/8”-27 threaded flange allows the microphone to mate with the threads of a standard mic stand and can be permanently mounted using the included 5/8” - 27 threaded stud.

**AT857AMx/AT857AMLx**
- A quick-mount version of the AT857AM a, the mic can be instantly installed and removed. 3-pin XLR-M connector insert at the base allows the AT857QMa to be plugged directly into any XLRF-type surface or cable connector
- Recessed switch in the power module permits choice of flat response or a low-frequency roll-off

**AT857QMa/AT857QMLa**
- A quick-mount version of the AT857AM x, the mic can be instantly installed and removed. 3-pin XLRM connector insert at the base allows the AT857QMa to be plugged directly into any XLRF-type surface or cable connector
- Recessed switch in the power module permits choice of flat response or a low-frequency roll-off

**AT859QMLx**
- Quick-mounting, the AT859QMLx has a 3-pin XLR-M connector insert at the base allowing it to be instantly installed and removed. Plugs directly into any XLRF-type surface or cable connector
- Recessed switch in the power module permits choice of flat response, or a low-frequency roll-off of 6 dB/octave at 150 Hz
**PRO SERIES— ProPoint Mics**

**Installed-Sound Condenser Microphones**

From ceilings to stage floors, from podiums to tabletops, ProPoint microphones have your miking needs covered.

- Wide-range condenser elements with low-mass diaphragms for superior performance
- Uniform cardioid polar pattern for maximum rejection of unwanted sounds
- Flat, smooth frequency response, high-SPL handling for voice, choir and orchestra
- They operate on 9-52v DC phantom power
- Self-contained electronics eliminate the need for external power modules
- Podium mics feature quiet, fixed-placement, long-life goosenecks
- Low-profile boundary mics for minimum visibility
- Rugged design and construction for reliable service

<table>
<thead>
<tr>
<th>Element</th>
<th>PRO 42</th>
<th>PRO 44</th>
<th>PRO 45</th>
<th>PRO 47T/ TL</th>
<th>PRO 49Q/ QL</th>
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</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>70 - 14k Hz</td>
<td>70 - 16k Hz</td>
<td>70 - 16k Hz</td>
<td>70 - 16k Hz</td>
<td>70 - 16k Hz</td>
</tr>
<tr>
<td>Open Circuit Sensitivity</td>
<td>-38 dB (12.5mV)</td>
<td>-25 dB (56.2mV)</td>
<td>-37 dB (14.1mV)</td>
<td>-37 dB (14.1mV)</td>
<td>-37 dB (14.1mV)</td>
</tr>
<tr>
<td>Impedance</td>
<td>100 Ω</td>
<td>100 Ω</td>
<td>100 Ω</td>
<td>100 Ω</td>
<td>100 Ω</td>
</tr>
<tr>
<td>Maximum SPL Input</td>
<td>134 dB SPL</td>
<td>114 dB SPL</td>
<td>134 dB SPL</td>
<td>134 dB SPL</td>
<td>134 dB</td>
</tr>
<tr>
<td>Signal to Noise Ratio</td>
<td>65 dB</td>
<td>66 dB</td>
<td>66 dB</td>
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<tr>
<td>Dynamic Range (Typical)</td>
<td>105 dB</td>
<td>86 dB</td>
<td>106 dB</td>
<td>106 dB</td>
<td>106 dB</td>
</tr>
<tr>
<td>Phantom Power (2.0mA Typical)</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
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<tr>
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<td>$106.95 / 114.95</td>
<td>$92.95 / 96.95</td>
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</tbody>
</table>

1. 1 kHz at 1% T.H.D. 2. 1kHz @ 1 Pa 3. 1 kHz @ Max SPL

**Pro42/ Pro44**

**Cardioid Boundary Mics**

The miniature PRO42 and low-profile Pro44 are wide-range condenser microphones with a hemi-cardioid (half-space cardioid) polar pattern designed for surface-mounted applications in high-quality sound reinforcement and other demanding sound pickup situations.

- Miniature PRO42 measures 1.44 x 2.14 x .61" (W x D x H) while the low-profile Pro44 measures 2.87 x 3.56 x .59" (W x D x H)
- The PRO42 (permanently-attached) and PRO44 (detachable) include a 25’ cable with XLRM-type connector
- Mic elements are enclosed in a rugged case and protected by heavy perforated steel. The rubber non-slip bottom pad minimizes mechanical coupling of surface vibrations to the microphone

**Pro45/ Pro45W**

**Cardioid Hanging Mics**

Designed for high-quality sound reinforcement, the PRO45 is furnished with a vinyl-coated steel hanger that allows it to be positioned inconspicuously over a choir, orchestra, stage, etc., for low-profile situations.

- Has a 25’ permanently-attached cable with XLRM-type connector
- Enclosed in a rugged housing with a low-reflection black finish. Also available with a white-finished (PRO45W) mic housing, cable and steel hanger for the times you need the mic hung against a light background

**Pro47T/ Pro47TL**

**Cardioid Thread-Mount Gooseneck Mics**

The PRO47T and PRO47TL are designed for high-quality sound reinforcement and other demanding sound pickup situations. Standing 12.4" (PRO47T) and 15.7" (PRO47TL) above the mounting surface, their small-diameter alternating gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured surface.

- 9.8’ permanently-attached cable with an XLRM-type connector
- Mic element is enclosed in a rugged housing with a low-reflection black finish. A 5 /8” - 27 threaded flange allows the mic to mate with the threads of a standard microphone desk or floor stand. A 5/8” - 27 threaded stud is also provided so it can be secured to a permanent mounting surface

**Pro49Q/ Pro49QL**

**Cardioid Quick-Mount Gooseneck Mics**

With an overall length of 13.07" (PRO49Q) and 16.46" (PRO49QL), their small-diameter alternating gooseneck design permits highly flexible positioning while maintaining a smooth, well-contoured appearance.

- XLRM-type connector insert at their base allows them to be plugged directly into an XLRF-type jack or cable connector
With an incredibly wide selection of offerings, the Pro Series has a microphone to suit any budget and any application. Includes a hefty assortment of handheld, lavalier, instrument, gooseneck and headphone microphones.

**PRO 2ax Handheld Dynamic Cardioid Mic**
The PRO 2ax is dynamic microphone designed for close-up vocal and instrumental use. Very affordable, the PRO 2ax offers unusually smooth response and uniform off-axis rejection of unwanted sound due to its cardioid pickup pattern. Cardioid pattern reduces unwanted background noise and controls feedback, especially when used extremely close. Miking instruments or vocalists at very close range also effectively reduces “leakage” from one performer to the next. Low-frequency noise is also reduced by a low-frequency roll-off of sounds more than one foot away from the microphone.

When used close-up, bass response increases because of proximity effect. This characteristic adds a mellow sound to both voice and instruments.

Enclosed in a rugged housing with a low-reflectance finish and a conveniently located on/off switch, the mic has a 2-stage ball-type screen to reduce wind noise and “popping” when performers work really close. Also includes a 5 meter (16.5’) cable with an XLR-F connector at the mic end, and a standard 1/4” phone plug at the equipment end. 

---

**PRO 4L Handheld Dynamic Cardioid Mic**
Dynamic microphone designed for close-up vocal and instrumental use, the PRO 4L is also ideal for general stage use and other sound reinforcement applications. Unusually smooth response, uniform off-axis rejection of unwanted sounds, and dependable performance have made the PRO 4L the industry standard in its class. When used ultra-close, the PRO 4L provides proximity effect (extra bass emphasis) which can be used to achieve a fuller sound, or to further reduce feedback in conjunction with equalization of the microphone input.

The PRO 4L is enclosed in a rugged housing with a low-reflectance finish and a conveniently located on/off switch. Internally shock-mounted capsule reduces handling and cable noise while the multi-stage windscreen effectively controls “popping”, distortion, and wind noise. Includes a 20’ XLR cable and soft case.

---

**PRO 5x Handheld Dynamic Cardioid Mic**
Designed for use in high-quality sound reinforcement systems and to meet the demands of professional musicians, the PRO 5X is equally suited to any application requiring absolute dependability and where quality sound reproduction cannot be sacrificed. Response is tailored to provide natural, full-range reproduction when used by vocals and instrumental performers at very close distances. The PRO 5X is enclosed in a rugged housing with a low-reflectance finish. Superior internal shock mounting provides effective isolation from handling and cable noise while the multi-stage windscreen effectively controls “popping”, distortion, and wind noise. Includes a 20’ XLR cable and soft case.

---

**PRO 10HE Handheld Dynamic Cardioid Mic**
A dynamic hypercardioid microphone, the PRO 10HE features a Hi-ENERGY neodymium magnet with alni-chromate magnet coating to ensure excellent transient response coupled with high efficiency. Designed for high-quality recording and sound reinforcement applications, the PRO 10HE has a double-dome diaphragm that unlike most dynamic mics provides both high sensitivity and extremely fast transient response for musical instrument and orchestral pickup.

---

**Specifications**

<table>
<thead>
<tr>
<th>Element</th>
<th>PRO 2ax</th>
<th>PRO 4L</th>
<th>PRO 5x</th>
<th>PRO 10HE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Neodymium Dynamic</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>90 - 13k Hz</td>
<td>60 - 14k Hz</td>
<td>60 - 16k Hz</td>
<td>60 - 15k Hz</td>
</tr>
<tr>
<td>Open Circuit Sensitivity</td>
<td>-40 dB (10.0 mV)</td>
<td>-58 dB (12.2 mV)</td>
<td>-57 dB (11.4 mV)</td>
<td>-53 dB (22.2 mV)</td>
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<tr>
<td>Impedance</td>
<td>8000 Ω</td>
<td>250 Ω</td>
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<td>600 Ω</td>
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<tr>
<td>Weight</td>
<td>5.1 oz (145 g)</td>
<td>10.1 oz (287 g)</td>
<td>11.5 oz (328 g)</td>
<td>8.6 oz (244 g)</td>
</tr>
</tbody>
</table>

---

**Additional Information**

- [PRO 2ax](#)
- [PRO 4L](#)
- [PRO 5x](#)
- [PRO 10HE](#)

**Order & Info.**

ORDER & INFO. (212) 444-5088 • FAX: (212) 239-7770 (800) 947-7008 1-800-875-6951 • www.bhphotovideo.com
PRO 7a
Miniature Cardioid Condenser
Lavalier/Instrument Microphone
A miniature cardioid condenser mic, the PRO 7a is designed for pickup of acoustic guitar and other acoustic instruments, and for hands-free applications in sound reinforcement systems. Close-up voice and instrument pickup are crisp and clean, yet full sounding, while suppression of background noise is significantly improved over that of stand-mounted full-size cardioid microphones.
- Mic element is enclosed in a rugged housing with low-reflectance finish
- Internal construction minimizes handling and clothing noise
- A built-in 3-position switch on the power module allows selection of off/flat response/low-roll-off
- Integrated 6-ft. cable with XLR-M connector between the mic and power module
- Runs 3500 hours on a single AA battery
- Includes clothing clip, guitar adapter and windscreen

PRO 25
High-SPL Hypercardioid Dynamic Instrument Microphone
With high SPL capability, the PRO 25 meets the critical requirements of professional musicians and high-quality sound reinforcement systems. Efficient motor system, large diaphragm and well-controlled polar pattern make it very effective in picking up highly dynamic instruments such as drums (kick, tom, snare), timpani, piano, acoustic and electric bass, and trombone. Also suitable for vocal pickup where low-frequency emphasis is desirable. When used ultra-close, the PRO 25 provides proximity effect (extra bass boost) which can be used to achieve a fuller sound.
- Rugged housing with a low-reflectance finish
- Internal shock mount provides effective isolation of the mic element from handling and cable noise
- Multi-level steel grille is extremely sturdy and provides "pop" protection for vocals
- Has an XLR output (no cable) and includes an integral stand clamp and soft protective pouch

PRO 35
High-Intensity Cardioid Clip-on Instrument Microphone
A miniature cardioid condenser mic, the PRO 35 is uniquely capable of picking up high-intensity sound without distortion. With a very small diaphragm (for excellent transient response) and the ability to handle high sound pressure levels, it is an effective tool in recording and sound reinforcement applications. Ideal for closely-miked instruments such as woodwinds, brass, strings, piano and specifically, snare and toms. The supplied AT8418 UniMount surrounds the mic with foam, shielding the element against accidental damage, isolating the mic from noise, and providing an efficient windscreen. The flexible boom lets you aim the microphone in any direction, while cable strain reliefs reduce cable-transmitted noise and cable damage. The "rubber-grip" spring clamp holds the microphone securely to the instrument without scratching the surface. A 5.9’ cable is provided between the mic and power module. A switch in the power module permits choice of flat response or low-frequency roll-off to help control undesired ambient noise. Also available as the PRO 35xcW: Same as above less power module and with a 55” (1.4 m) cable terminated with 4-pin HRS connector for Audio-Technica UniPak wireless system.

PRO 95
Acoustic Instrument Condenser Microphone
The PRO 95 is designed for professional musicians, especially for reproduction of acoustic guitar and other string instruments. Uniquely capable of being mounted inside a guitar, the mic provides sound pickup that is crisp and clean, yet full sounding.
A "rubber-grip" spring clamp holds the microphone securely to the instrument without marring the surface. The flexible boom allows you to aim the mic in any direction, while a cable strain relief reduces cable-transmitted noise and the possibility of cable damage. The mic element is enclosed in a rugged housing with a low-reflectance finish. The PRO 95 is permanently connected to an ultra-flexible 24’ cable and in-line power module with an on/off switch. A clip for the power module and a battery (runs for about 400 hours on a single 1.5v LR44-type battery) are provided as well as a wind screen. Also includes an end-pin jack and 1/4” phone plug for optional permanent installation inside a guitar.
PRO 8HEx
Hi-ENERGY Headworn Hypercardioid Dynamic Microphone
The PRO 8HEx is a light-weight, headworn dynamic mic ideal for performing musicians, aerobics instructors and for anyone who needs a professional-quality mic with hands-free operation. Featuring a HI-ENERGY Neodymium magnet with alni-chromate coating, the motor structure ensures excellent transient and frequency response, reduces distortion, and provides a high output level not normally achieved by other headworn dynamic microphones.

The result is crisp, clean vocal pickup. The combination of hypercardioid polar pattern and headworn design provides suppression of background noise that is significantly improved over that of full-size, stand-mounted cardioid microphones.

Features include a mic capsule moisture barrier, a durable cable assembly, and a covered stainless steel headband which can be gently flexed to adjust for a comfortable, stable fit around the back of any head. The PRO 8HEx includes a permanently attached 7.2' cable with XLR-M connector, two wind screens (large and small) and a clothing clip.

PRO 37R
Small-Diaphragm Cardioid Condenser Recording Microphone
A wide-range cardioid condenser mic, the PRO 37R is an excellent choice for high-quality sound reinforcement systems and for pickup of instruments such as drums, piano and brass. It can also be used for professional recording, broadcasting and situations demanding the highest-quality sound performance coupled with excellent reliability in a small package.

With the addition of an AT8106 metal-frame pop filter, the PRO 37R becomes a studio-grade vocal and dialog mic suitable for professional studio and sound reinforcement applications. The PRO 37R is enclosed in a rugged housing with a low-reflectance finish. Internal shock mounting is designed to minimize handling and cable noise. Includes snap-in clamp for standard 5/8˝-27 threaded stands and a foam windsreen. Accepts external phantom power from 9v to 52v DC, output is via XLR-M.

PRO 11
Single -Gooseneck Unidirectional Dynamic Console Microphone
A uni-directional dynamic console mic designed for use as a quality talk-back microphone, the PRO 11 provides excellent intelligibility and dependable performance in entertainment, commercial and industrial voice applications. Features include a conveniently-located on/off switch, balanced low-impedance output, and an integral 3-pin XLR connector that plugs directly into a panel jack or mic cable. A protective screen reduces wind noise and “popping” when used extremely close, while internal construction reduces handling and shock noise.

<table>
<thead>
<tr>
<th>Element</th>
<th>PRO 7a</th>
<th>PRO 25</th>
<th>PRO 35x</th>
<th>PRO 95</th>
<th>PRO 8HEx</th>
<th>PRO 37R</th>
<th>PRO 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>Condenser</td>
<td>Dynamic</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Neodymium Dynamic</td>
<td>Condenser</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>300 - 15k Hz</td>
<td>30 - 12k Hz</td>
<td>50 - 17k Hz</td>
<td>80 - 13k Hz</td>
<td>200 - 18k Hz</td>
<td>30 - 15k Hz</td>
<td>150 - 13k Hz</td>
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<tr>
<td>Open Circuit Sensitivity</td>
<td>-45 dB (5.6 mV)</td>
<td>-54 dB (1.9 mV)</td>
<td>-54 dB (1.9 mV)</td>
<td>-40 dB (10.0 mV)</td>
<td>-55 dB (1.7 mV)</td>
<td>-42 dB (7.9 mV)</td>
<td>-55 dB (1.7 mV)</td>
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<td>Impedance</td>
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<td>600 Ω</td>
<td>200 Ω</td>
<td>2000 Ω</td>
<td>600 Ω</td>
<td>200 Ω</td>
<td>500 Ω</td>
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<tr>
<td>Maximum SPL Input¹</td>
<td>124 dB SPL</td>
<td>—</td>
<td>149 dB SPL</td>
<td>105 dB SPL</td>
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<td>141 dB</td>
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<tr>
<td>Signal to Noise Ratio¹</td>
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<td>60 dB</td>
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<td>—</td>
<td>65 dB</td>
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<td>Battery Type</td>
<td>1.5V AA</td>
<td>—</td>
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<td>—</td>
<td>1.5V LR44-type</td>
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<td>Battery Current/Life (Typical)</td>
<td>0.2 mA/3500 hrs</td>
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<td>—</td>
<td>0.4 mA/400 hrs.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Low-Frequency Roll-off</td>
<td>150 Hz</td>
<td>—</td>
<td>150 Hz</td>
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<tr>
<td>Weight</td>
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<td>9.5 oz (270 g)</td>
<td>0.25 oz (7 g)</td>
<td>3.4 oz (95 g)</td>
<td>2.1 oz (60 g)</td>
<td>2.1 oz (60 g)</td>
<td>9.9 oz (280 g)</td>
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<tr>
<td>Price</td>
<td>89.95</td>
<td>118.95</td>
<td>CALL</td>
<td>117.50</td>
<td>69.95</td>
<td>136.50</td>
<td>52.50</td>
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</table>

1. 1 kHz at 1% T.H.D.  2. 1kHz @ 1 Pa  3. 1 kHz @ Max SPL  4. 6dB per octave
AT822/AT825 OnePoint X/Y Stereo Mics

The AT822 and AT825 are X/Y stereo condenser microphones designed for broadcast, professional recording and field applications. The AT822 features unbalanced connections ideally suited for use with portable MiniDisc and DAT recorders, or for mounting onto a prosumer camcorder. On the other hand, the AT825 features balanced XLR connections compatible with professional mic preamps, mixers and video cameras, as well as the more substantial digital field recorders. Both the AT822 and the AT825 provide excellent channel separation with full, natural stereo ambience in a compact, lightweight design and are equally at home mounted on a stand, fishpole or camera and can even be as hand-held mics for electronic news gathering. The two wide-range, closely-matched, optimally-positioned cardioid condenser elements exhibit a uniform frequency response throughout their polar range. This provides the spatial impact and realism of a live sound field—while simultaneously remaining fully mono (L+R) compatible.

- Consistent natural-sounding response over an arc of approximately 170° (AT822) and 220° (AT825)
- Excellent channel separation
- Switchable low-frequency roll-off
- Distortion-free signal even in sound fields as high as 125 dB SPL
- The AT822 runs on a single AA, the AT825 can run on phantom power or a AA battery
- AT822 includes a 1.7’ cable (XLR-female to stereo 3.5 mm mini-plug); and a 10’ cable (XLR-female to two mono 1/4” plugs); gun-grip/stand clamp; camera shoe-mount adapter; windscreen; battery; case
- AT825 includes a 16.5’ cable (5-pin XLR to two standard 3-pin XLR connectors), stand clamp; windscreen; battery; case.

AT849 Stereo Condenser Boundary Mic

The AT849 is a X/Y stereo condenser boundary microphone designed for surface-mounting. The two wide-range, optimally-positioned miniature condenser cardioid elements provide natural stereo ambience ideally suited for broadcast, professional recording and live sound reinforcement applications.

- Consistent, natural sound over an arc of approximately 220°
- Fully mono compatible L+R polar pattern is virtually free of lobes and comb effects.
- Uniform polar response over an extended, smooth and peak-free frequency response of 30Hz to 20kHz
- Requires 9V to 52V DC phantom power per channel
- 2-position switch selects flat or low-roll-off response
- Rugged low-profile housing protected by two layers of perforated steel. The heavy case and rubber non-slip bottom pad minimizes mechanical coupling of surface vibrations to the microphone.
- Low-reflectance black finish
- Includes a soft pouch and 25’ shielded cable with a five-pin TA5F input connector and two standard three-pin male XLR output connectors

AT854R Multi-channel Condenser Boundary Mic

A multi-channel boundary microphone with four cardioid condenser elements mounted in a low-profile housing that ensures minimum visibility. Ideal for high-quality sound reinforcement and a variety of video and audio conferencing applications. The four independently phantom powered quadrants can be used individually or in any combination and integrated easily with a standard or automatic mic mixer.

- Four mic channels mounted in separate quadrants
- Rugged low-profile housing protected by two layers of perforated steel. The heavy case and rubber non-slip bottom pad minimizes mechanical coupling of surface vibrations to the microphone.
- Requires 9-52V DC phantom power per channel.
- Includes a rugged 30’ cable with a miniature multi-contact metal-body plug and four separate shielded and jacketed pairs terminating to four male XLR connectors
- Low-reflectance black finish

- Requires 9-52V DC phantom power per channel.
- Includes a rugged 30’ cable with a miniature multi-contact metal-body plug and four separate shielded and jacketed pairs terminating to four male XLR connectors
- Low-reflectance black finish
AT804 Omnidirectional Moving Coil Dynamic Mic

Designed for use in professional recording and broadcasting studios, high quality sound reinforcement, and other demanding sound pickup situations. Hardened-steel grille and die-cast case make the mic ideal for field applications where rugged construction is essential. The omnidirectional polar patterns ability to pick up sound equally from all directions means that with close-up miking, the mic won't accentuate bass frequencies due to proximity effect. The omnidirectional pick-up pattern is also ideal for distant miking where the reproduction of ambient environments is desired.

- Rugged die-cast housing with a low-reflectance finish
- A protective hardened-steel screen reduces wind noise and plosives
- Internal shock mounting reduces handling and cable noise.
- Includes a snap-in stand adapter with 5/8"-27 threads and a soft protective pouch are included

813a Battery/Phantom Cardioid Condenser Mic

Designed for use in high-quality sound reinforcement systems and for use by professional musicians, especially for vocal pickup. It can also be used for professional recording, broadcasting and other applications demanding the highest quality sound performance coupled with excellent reliability.

- Powered by a single AA battery for up to 1200 hours or 9-52V DC phantom power
- Cardioid polar pattern controls feedback and provides extra bass emphasis (proximity effect) when used ultra-close
- Low-mass diaphragm ensures minimum distortion
- Large windscreen is especially effective in reducing "popping" and distortion from sibilant sounds
- Includes stand clamp; battery and protective pouch

AT808G Subcardioid Dynamic Console Mic

Designed for use as a quality talk-back microphone.
- Dependable performance for entertainment, commercial and industrial applications
- Custom-tailed frequency response ensures excellent intelligibility in environments with excessive ambient noise
- Protective windscreen and rugged construction
- Plugs directly into an XLRF-type surface or cable connector
- Overall length of 16.2"
AT815b and AT835b
Line + Gradient Condenser Mics
The 18” AT 815b and 14.5” AT 835b are wide-range condenser microphones with a line + gradient polar pattern specifically designed to provide the narrow acceptance angle desirable for long distance sound pickup. They are ideal for use in professional recording, broadcasting, film/TV/video production, high-quality sound reinforcement and other demanding applications requiring excellent sound rejection from the sides and rear. The shorter AT 835b is well suited for boom/fishpole use as well as mounting on professional video cameras, whereas the longer AT 815b has a narrower acceptance angle and is particularly useful for applications that require a longer reach.

- Rugged housing with a low-reflectance matte satin nickel finish
- Recessed switch lets you choose either flat or a bass roll-off of 180 Hz at 12dB/octave
- Powered by a single AA battery or 9-52v DC phantom power
- Includes AA battery, foam wind-screen, microphone stand adapter with 5/8˝-27 threads, and a compartment carrying case designed to hold the microphone and accessories

AT815ST/AT835ST
Stereo Condenser Shotgun Microphones
Developed at the request of broadcasters for cost effective, compact stereo shotguns, the 9˝ AT 815ST and 14˝ AT 835ST combine professional audio quality, outstanding versatility, ease of use and robust construction, making them essential audio tools for today's high-quality stereo video production. Both mics feature independent line-cardioid and figure-of-eight condenser elements to provide a choice of three stereo modes including non-matrixed M-S (Mid-Side) stereo as well as two internally-matrixed left/right stereo modes.

- Two internally-matrixed left/right stereo modes and non-matrixed M-S mode are switch selectable
- Switchable low-frequency roll-off
- Compact, lightweight design provides exceptional mounting versatility including camera-mount
- Includes foam wind-screen, microphone stand adapter with 5/8˝-27 threads, and compartment carrying case

<table>
<thead>
<tr>
<th>Element</th>
<th>AT-815ST</th>
<th>AT-835ST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condenser Polar Pattern</td>
<td>Line-Cardioid &amp; Figure of 8</td>
<td>Line + Gradient</td>
</tr>
<tr>
<td>Frequency Response (AT815B/AT835B)</td>
<td>30-20k Hz</td>
<td>40-20k Hz</td>
</tr>
<tr>
<td>Open Circuit Sensitivity (Mid/Side/LR Stereo)</td>
<td>-30 dB (31.6 mV) /-34 dB (19.9 mV) /-36 dB (15.8 mV)</td>
<td>-36 dB (12.5mV) / -39dB (11.2mV)</td>
</tr>
<tr>
<td>Impedance</td>
<td>200 Ω</td>
<td>200 Ω</td>
</tr>
<tr>
<td>Maximum SPL Input (Mid/Side/LR Stereo)</td>
<td>123 dB /127 dB / 126 dB</td>
<td>106 dB / 91dB</td>
</tr>
<tr>
<td>Signal to Noise Ratio1</td>
<td>72 dB</td>
<td>70 dB</td>
</tr>
<tr>
<td>Dynamic Range Typical (Mid/Side/LR Stereo)</td>
<td>101 dB / 101 dB / 102 dB</td>
<td>101 dB / 91dB</td>
</tr>
<tr>
<td>Phantom Power (2.0mA Typical)</td>
<td>9 - 52V</td>
<td>9 - 52V</td>
</tr>
<tr>
<td>Battery Type (Life)</td>
<td>1.5V AA (up to 1200 hrs.)</td>
<td>1.5V AA (up to 1200 hrs.)</td>
</tr>
<tr>
<td>Low-Frequency Roll-off</td>
<td>12dB/oct @ 80 Hz</td>
<td>12dB/oct @ 80 Hz</td>
</tr>
</tbody>
</table>

M-S mode provides an independent cardioid element (Mid) and figure-8 element (Side). The advantage of this design is that the stereo balance of the separate Mid-Side signals can be adjusted later on in post-production instead of in the field.

Two internally-matrixed modes provide traditional “left-right” stereo that accommodates varying acoustic environments. The LR-W pattern is wider, allowing increased ambient pickup, while the LR-N pattern is more narrow to offer greater rejection with less ambience.

<table>
<thead>
<tr>
<th>Three Stereo Modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-S mode provides an independent cardioid element (Mid) and figure-8 element (Side). The advantage of this design is that the stereo balance of the separate Mid-Side signals can be adjusted later on in post-production instead of in the field.</td>
</tr>
<tr>
<td>Two internally-matrixed modes provide traditional “left-right” stereo that accommodates varying acoustic environments. The LR-W pattern is wider, allowing increased ambient pickup, while the LR-N pattern is more narrow to offer greater rejection with less ambience.</td>
</tr>
</tbody>
</table>
Adaptive-Array Microphone System

Utilizing AT’s proprietary DeltaBeam technology, the AT 895 system manipulates the amplitude and phase of its 5-element array by acoustical, analog and digital means, providing off-axis rejection of up to an astounding 80 dB. The system continuously adapts to a changing soundscape, and is especially effective at suppressing unwanted low-frequency information. Background interference, mechanical noise, wind noise, proximity effect—all are minimized automatically. And, unlike some attempts at directive devices, the audio quality remains wideband and natural. The AT 895 provides great operating versatility and ease of use with three polar-pattern choices, three EQ selections and three powering options. Functioning equally well for handheld interview use and long-range sound pickup, the AT 895 excels at tasks from ENG to sports broadcast to film production to surveillance operations.

About DeltaBeam Technology

DeltaBeam technology is a unique, groundbreaking optimization of acoustic, analog and digital design that produces unmatched directional performance, operating versatility and ease of use.

- Provides an adaptive array to substantially reduce background acoustic interference
- Improves sensitivity, pickup distance and gain-before-feedback as compared to currently-available professional microphone technology
- Provides a tool for the discrimination of specific sources, even in very high-noise environments
- Provides greatly increased off-axis rejection, even for very loud interference
- Provides outstanding low-frequency directivity (an amazing 78dB maximum rejection at 200 Hz!) in a mic only 14’’ long
- Minimizes the audibility of proximity effect
- Minimizes nearfield effect on the low-frequency directivity of the array
- Reduces susceptibility to mechanical noise, wind noise and racking as compared to other professional mics

The Ultimate Audio Acquisition Solution

High-directivity, wideband audio quality, and the ability to suppress unwanted low-frequency information make the AT 895 the best solution for many broadcast, film/video and surveillance/security applications. Used in football or soccer, the AT 895 delivers vivid audio of player contact, ball strikes and sideline conversations. Covering golf, it eliminates wind noise rumble while providing precise directivity. Also very effective in track & field, equestrian events and tennis.

The AT 895’s ability to attenuate audio clutter that masks desired sounds is invaluable for a multitude of field production situations such as interviewing, sound effects gathering and dialog acquisition.

The same capabilities that make the AT 895 such an effective tool in broadcast also apply to security applications. Used alone or in conjunction with surveillance cameras, the AT 895 provides exact audio pickup in locations such as hotels, casinos, banks, schools and parks.

AT895 vs. TYPICAL SHOTGUN PERFORMANCE*

Compare acceptance angles (at 3 dB down):  

<table>
<thead>
<tr>
<th>Microphone</th>
<th>200 Hz</th>
<th>400 Hz</th>
<th>1 kHz</th>
<th>2 kHz</th>
<th>4 kHz</th>
<th>8 kHz</th>
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<tbody>
<tr>
<td>Shotgun</td>
<td>60°</td>
<td>60°</td>
<td>60°</td>
<td>50°</td>
<td>30°</td>
<td>20°</td>
</tr>
<tr>
<td>AT895</td>
<td>20°</td>
<td>20°</td>
<td>20°</td>
<td>60°</td>
<td>20°</td>
<td>10°</td>
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Compare polar patterns at 200 Hz:  

<table>
<thead>
<tr>
<th>Microphone - 200Hz Rejection at 90°/270°</th>
<th>Shotgun - Maximum Off-axis Rejection</th>
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<tr>
<td>Shotgun</td>
<td>Shotgun</td>
</tr>
<tr>
<td>15 dB</td>
<td>70 dB</td>
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</table>

The AT 895 is available in two system configurations: The AT 895/RK “Remote Kit” for field use, and as the AT 895/MK “Mount Kit” for fixed-install applications.

**AT895/RK Remote Kit**

- AT895MIC Adaptive-array Microphone
- AT895CP Control Pack w/ attached belt clip
- AT895BH Click-on Battery Housing
- AT895PG Pistol-grip Shock Mount
- AT895Z Zeppelin-type Windscreen
- AT895C-10 6-conductor shielded 10’ cable
- AT895CC Carrying Case

**AT895/MK Mount Kit**

- AT895MIC Adaptive-array Microphone
- AT895CP Control Pack
- AT895SC Shock-mount Stand Clamp
- AT895PS1 Multi-input AC Adapter with “120V” IEC detachable power cord
- AT895C-25 6-conductor shielded 25’ cable

*Compared to typical performance of a professional-quality 15.5” line + gradient microphone (measurement conditions: 1Pa at 0.5 m). Due to the adaptive nature of its digital processing, AT895 performance in actual field conditions will vary with the environment encountered.
4-and 5-Channel SmartMixers

The AT MX-341A and AT MX-351 are automatic mixers ideal for meetings, seminars, teleconferencing, worship services, courtroom proceedings, radio and TV broadcasting and A/V applications. All switching is under microprocessor control with proprietary algorithms for instant, seamless operation. An individual priority pre-select switch for each mic/line channel allows choice of one-channel-at-a-time operation, all active, or any mix of moderator override. The last microphone on stays on so that ambient sound is never muted. Plus, any number of SmartMixers can be linked to create a system for large multi-mic installations. The priority control system extends throughout the entire chain.

What is a SmartMixer?
Field-proven to be the easiest, most flexible way to automatically control a sound system, SmartMixers deliver fast, quiet and incredibly “smart” performance in a variety of applications. By keeping the number of open channels to a minimum, they reduce background noise and other distractions. And they provide instant, completely transparent switching between channels. Now available in two models, SmartMixers offer a host of innovative features that ensure easy setup, effortless operation and unrivaled versatility.

Flexible Operation
SmartMixers feature priority pre-select switches for each channel. If all channels are priority “off” (no one has priority), the system opens just one microphone at a time, switching to the next only after the controlling channel falls quiet. The operation is so fast and silent that this is the recommended mode. A single channel set to priority “on” will override all the others, useful for moderators and chairpersons. If all channels are priority “on,” any number of people can talk at once. Regardless of the priority switch settings, all mics not in use are attenuated by the mixer. SmartMixers also have a switchable manual mode, permitting them to function as conventional mixers.

Advanced Features:
- Four Mic/Line inputs with individual priority pre-select switch for each channel
- Balanced inputs and output are individually switchable between mic and line-level
- 12V phantom power individually selectable for each channel
- Single threshold setting for all channels
- TTL logic output signals available to control speaker or camera switching, tally lights, etc.
- 20dB adjustable attenuation for inputs
- Mounts in a single 19” half-rack space, includes rack mount adapters
- Master output level control
- Switchable manual mode overrides automatic functions
- Individual gain controls for each channel
- Output level meter with Peak and RMS modes

They Both Feature:
- Four automatic mic/line inputs, plus Aux in
- Automatic threshold setting
- 48v phantom power individually selectable for each channel
- Limiters on each mic channel prevent individual channel overload
- Balanced inputs and output, selectable Mic/Line-level
- Pre- or post-controller audio outputs from Mic/Line channels
- Sub-D connector for TTL output, plus closure-control input for external control of each channel
- Off attenuation for each input adjustable to -40dB
- NOMA operation (can be turned on/off)
- Headphone output with adjustable level
- Internal AC supply
- Mounts in a single 19” rack space, includes rack mount adapters
AT8202 Adjustable In-Line Attenuator

The AT8202 provides -10dB, -20dB or -30dB attenuation, preventing overload of sensitive input stages. For use with balanced Lo-Z microphones, it is compatible for use in phantom power applications. Durable steel case provides optimum shielding from hum. Input impedance is 1000 ohms (-10 dB), output impedance is 200 ohms (-10 dB). Has a XLR-F input and XLR-M output. ............................................................... 43.50

AT8801/CP8506 Single- and Four-Channel 48v Phantom Power Supplies

The AT8801 and CP8506 are 120v AC powered devices that provide 48v phantom power to remote-powered microphones such as those in the 40 Series, UniPoint, and Artist Series. The AT8801 powers a single microphone while the CP8506 can power up to four. Their rugged steel case is finished in enamel and provides shielding from electrostatic interference.

CP8201 Line Matching Transformer

The CP8201 matches low-impedance microphones to high-impedance electronic inputs. Reduces noise pickup, maintains high frequency response and permits use of long mic cables. Input impedance is 250 ohms, output impedance is 50,000 ohms. Has a XLR-F input, 1/4” plug out. ☑ 19.95

CP8305 Line Matching Transformer Cable

Same as the CP8201 except the CP8305 adds 16’ of cable. XLRF in, 1/4” plug out. ☑ 29.95

AT8410a & AT8415 Shock Mounts

These shock mounts provide excellent mechanical isolation while offering unusual versatility and ease of use. Equally adapted to cylindrical and tapered mics, they attenuate noise, shock and vibration transmitted through stands, booms and fixed mic mounts. The AT8410a permits easy mic insertion and removal without detaching the mic cable; its spring-loaded clamp holds even heavy mics securely. The AT8415’s light weight and low profile make it an excellent choice for “fishpole” booms and for video use.

The AT8410a is compatible with 5/8”-27 threaded stands and includes a 180° swivel for easy, positive mic adjustment. Isolation is accomplished with elastic shock cord. The AT8415 is compatible with 3/8”-16 and 5/8”-27 threaded stands, and features a constant-tension clutch and 360° rotation. Isolation is accomplished with four chloroprene bands.

AT8410a ..........49.95 AT8415 ..........49.95

AT8416 Shock Mount

Designed for UniPoint and similar goose-neck mics mounted on lecterns, pulpits, conference tables and similar surface, the AT8416 effectively isolates them from impact vibration and shock handling. A slot is provided in the mounting flange to allow a small-diameter cable to pass down the mounting hole. A cable channel secures the cable in the flush mount assembly and helps to further deaden the transmission of vibration. ☑ 49.95

AT8418 UniMount Microphone Instrument Mount

Rubber grip spring clamp holds mic securely to instrument without marring finish. Flexible boom permits aiming the microphone in any direction. Cable strain reliefs reduce cable-transmitted noise and cable damage. Foam windscreen entirely surrounds mic for best performance and protection. ☑ 37.50

AT8601/AT8614/AT8615/AT8615RS Microphone Desk Stands

The AT8601 is compatible with any 5/8”-27 threaded stand clamps. The AT8614 is the same, plus it has a thru-hole in 5/8”-27 stud for cable passage. The AT8615 is a quick-mount plug-in cast-metal stand for any goose-neck mic with XLRM output. The AT8615 is the same plus it has a press-on/off mute switch for phantom-powered mics.

AT8601 . . . . . 17.50 AT8614 . 29.95 AT8615. 49.95 AT8615RS . 57.50

MICROPHONE ACCESSORIES

PHOTO - VIDEO - PRO AUDIO
**UniTools**

Phantom-powered in-line microphone accessories to overcome commonly-encountered sound installation challenges quickly, easily and effectively. Available in two function-specific models, they are intended primarily for use with UniPoint and similar condenser microphones. Both have XLR input/output connectors, and require balanced cables and 24-48V phantom power for operation.

- **Rugged steel housings**
- **Can be installed anywhere in-line, either at the mixer input or near the mic**

**AT8681 UniMix**  
2-to-1 Mic Combiner with Balance Control  
Combines the output from two microphones into one channel. The balance control attenuates each microphone by 6 dB (typical) at midpoint.

**AT8684 UniMute**  
Mic Attenuator with User-Definable Switch Function  
Versatile attenuator permits easy in-line switch installation and flexible application. Type of external single-pole switch the user supplies determines muting function; closed contact causes muting. Use for on/off, push-to-talk, push-to-mute, etc.

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**SPECIFICATIONS**

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<thead>
<tr>
<th></th>
<th>UniMix</th>
<th>UniMute</th>
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<tr>
<td>Frequency Response</td>
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<td>Noise</td>
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<td>Max. Input Level*</td>
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<tr>
<td>Max Attenuation</td>
<td>33 dB at 1 kHz</td>
<td>57 dB at 1 kHz</td>
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**SGM-2X Professional Shotgun Microphone**

Designed for pro-sound and broadcast applications, the SGM-2X comes with two barrels, an omni (8.11” long) or, by adding the extension barrel, a supercardioid (15.75” long). Either configuration provides a sensitive (-50dB), low-noise, wide bandwidth signal (40Hz - 20kHz) through its balanced, low-impedance XLR output. Comes complete with an integrated shock-mount, both camera shoe-mount and mic stand-mount, and two foam windscreens.

- 2 barrels - an 8 1/8” omni and extension barrel – make it a 15.75” supercardioid
- Balanced low impedance (680 ohm) XLR output
- Integrated shockmount attaches to camera shoe or mic stand
- Plugs into the 41XT transmitter to make a wireless shotgun mic
- Switchable low-cut filter
- Runs 1000 hours on a single AAA battery

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**SGM-1X • SGM-X**

Following up on the success of the SGM-2X, Azden offers two shorter versions—the SGM-1X and SGM-X—specifically designed for today’s smaller DV camcorders.

Ideal for the Canon GL-2, Sony DCR-VX2000 and other similar type camcorders, the 8.5” SGM-X is a complete system, including windscreen, shoe-mount holder and mini cable. Has a mini output.

At 11.75” the SGM-1X is designed for camcorders like the Canon XL-1s and Sony PD-150. It features an XLR output and comes supplied with Azden’s unique shockmount holder with integrated shoe mount.
Other miniature mics require external power supplies that are bulky, cumbersome, and require extra cabling. Not only do the Micros eliminate the additional power supply, but the preamp they use is very special. The circuitry is the same topology used in Audix's SCX series. The Micros are studio quality mics with very low noise, wide dynamic range, and high quality performance. And with a sound that is absolutely astounding, just think of the possibilities for live sound, location recording, and installations.

The M 1245 and M 1290 ‘Micros’ are the world’s small condenser microphones with an integrated preamp and detachable cable. The M 1245 is less than 2” long and weighs a mere .6 oz while the M 1290 is 3.5” in length and weighs in at 1 oz. Characterized with precision machined brass body and black E-coat finish, each is laser etched with its model and serial number. Individual models include a variety of polar patterns to choose from including cardioid, hypercardioid, omni-directional and shotgun capsules.

The M 1245 has a smooth uniform response frequency range is 80Hz-20kHz, while the M 1290 has a wider response of 40Hz-20kHz. Phantom powered, the mics are low impedance, fully balanced, and allow cable runs of up to 150’. The mics are packaged in a classic rosewood case, and include 12’ cable, mic stand adapter, and snap on foam windscreen. Optional accessories include cables, insulated shock mount clip, and a clip for for overhead hanging applications. They are also compatible with the D-Vice and D-Clamp for a wide variety of instrument miking.

**Supplied Accessories**
- CBL-M12: 12’ high quality cable with Mini XLRF-XLRM connectors
- M-C-Micro: Mic stand adapter
- Rosewood Case

**Optional Accessories**
- CBL-M25: 25’ high quality cable with Mini XLRF-XLRM
- CBL-M50: 50’ high quality cable with Mini XLRF-XLRM
- Hanger-Micro: Low profile hanger clip allows precise positioning
- SMT-Micro: Stand adapter with rubber insulated shockmount

<table>
<thead>
<tr>
<th>Pattern</th>
<th>M1245</th>
<th>M1245-HC</th>
<th>M1290</th>
<th>M1290-HC</th>
<th>M1290-O</th>
<th>M1290-S</th>
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<td>Cardioid</td>
<td>Hypercardioid</td>
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<td>40 to 20k</td>
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<td>20 to 20k</td>
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<td>&gt;20dB</td>
<td>&gt;20dB</td>
<td>&gt;20dB</td>
<td>—</td>
<td>&gt;20dB</td>
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<tr>
<td>Maximum SPL</td>
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<td>140 dB</td>
<td>140 dB</td>
<td>140 dB</td>
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</table>
OM-Series Dynamic Hypercardioid Vocal Microphones

OM-Series microphones are designed for live vocal performances. Combining high performance, high levels of gain and very low feedback, they challenge the best of much more expensive brands. When it comes to handling high sound pressure levels, off-axis rejection and purity of sound, these mics will simply blow you away! They are also designed for artists and engineers who refuse to compromise and, as such are manufactured to exacting standards and built to last a lifetime.

“Application specific”, you can choose a microphone based on the type of music you play, vocal style, size of the group, stage volume, and type of PA equipment. Audix mics will give you the freedom to optimize your performance each and every time. So whether you’re on a world tour, playing a small club, or recording your next demo, there is an Audix mic for you.

MICROPHONES

OM-2 Vocal/Instrument Mic
Designed to provide high quality sound for a wide variety of vocal styles, the highly affordable OM-2 is an all purpose mic that sounds great on just about everything. It incorporates hallmark Audix features and characteristics including rich, natural vocal sound with exceptional clarity and detail; superior off-axis rejection; and the ability to perform at high levels without feedback or distortion. A worthwhile addition to any live sound or home studio application.

- Frequency response of 50Hz-16kHz, 140 db SPL handling, durable zinc alloy construction, electronically cut blast filter with black E-coat finish
- Comes with cordura carrying case and nylon mic clip

OM-3 Vocal/Instrument Mic
An excellent choice for any size stage, the OM-3 produces highly accurate, natural sound with minimal bass proximity. It provides over 25dB of feedback rejection off-axis and handles up to 144dB SPL without distortion. A dent-resistant spring-steel grill adds to the OM-3's road-worthiness. Also available with an on/off switch (OM-3-S).

- Uniform frequency response of 50-18kHz
- Clear, natural sound for mid to large PA. Compared to the OM-2, the OM-3 has slightly less bass proximity and will provide higher gain before feedback in the monitors
- Overall natural sound quality and consistency, make the OM-3 the mic of choice for many sound companies and high profile vocalists
- Transformerless design, low impedance, and balanced output allow interference-free performance even with long cable runs

OM-1 Vocal Mic
First produced in 1985 and re-introduced for the new millennium, the OM-1 provides original cutting edge sound with a stylish two-stage, machined brass body. Updated composite capsule housing and mounting system allows very high output with extremely low handling noise.

- Frequency response of 50 Hz-15 kHz
- Frequency response, 140 dB SPL handling, electronically cut blast filter and a durable unique two-piece brass body
- Supplied with a cordura carrying case and nylon mic clip

OM-2 Vocal/Instrument Mic
Designed to provide high quality sound for a wide variety of vocal styles, the highly affordable OM-2 is an all purpose mic that sounds great on just about everything. It incorporates hallmark Audix features and characteristics including rich, natural vocal sound with exceptional clarity and detail; superior off-axis rejection; and the ability to perform at high levels without feedback or distortion. A worthwhile addition to any live sound or home studio application.

- Frequency response of 50Hz-16kHz, 140 db SPL handling, durable zinc alloy construction, electronically cut blast filter with black E-coat finish
- Comes with cordura carrying case and nylon mic clip

OM-5 PA/Vocal Mic
A truly remarkable performance vocal microphone, the OM-5 has appeared in many high level concert performances including Alanis Morissette, Foo Fighters and Bonnie Raitt as well as becoming a standard on many TV shows and music videos.

- The OM-5 is attenuated in the lower mid-bass with a slight presence peak in the upper mid-range. It sounds excellent on full range PA systems and is characterized as being natural, articulate, and able to cut through the stage mix without sounding harsh or shrill
- An exceptionally tight pattern mic, the OM-5 allows for very high level monitor gain without feedback
- Also successful at reducing the sound of guitar and drums coming through the vocal mix, a real plus for the performer and engineer
OM-Series, Fusion Series, CD-Series

OM-6
Full, rich sound. Ideal for in-ear monitor systems. The OM-6 has also met with critical acclaim in the world of pro sound. Unlike the OM-5 which has a natural attenuation of bass frequencies (below 100 Hz), the OM-6 is a very full range microphone capable of reproducing tones down to 63 Hz. Characterized as being extremely pure and accurate, the OM-6 has a more “studio-like” sound and appeals to vocalists who want minimal coloration.

OM-7
There is no competition when it comes to gain before feedback. Having become a standard on the touring rock concert scene, the OM-7 is considered to provide the highest gain before feedback of any microphone on the market, especially in the monitor system. The unconventional low output gain stage of the OM-7 acts as a natural pad and allows for incredible sound pressure levels to be achieved during live performances, without sacrificing tonal quality.

Fusion Series
Affordable dynamic microphones, the Fusion series offer exceptional performance at a breakthrough price. They are designed for a wide variety of applications including music, speech, corporate AV presentations, karaoke, worship and education.

- An excellent all purpose mic for both live sound reinforcement and recording. The F50’s cardioid pattern helps minimize feedback and unwanted off-axis noise from other mics or instruments on stage.
- The F50 is a dynamic mic designed to handle a wide variety of vocal and instrument applications for both live sound and recording. Characterized with a wide cardioid pickup pattern and a 50 Hz to 16 kHz frequency response, the F50 is designed with a slight bass proximity and mid-range presence boost. This results in a warm natural response for nearly every type of voice.
- The F50 is engineered to handle very high levels of gain without distortion and provides over 20 dB of off-axis feedback rejection.
- Solidly built with a cast zinc alloy body and steel mesh grille ball with an internal pop screen. The F50-s includes an on/off switch.

F50-BP Band Pack includes 3 F-50 and 1 F50-S in an aluminum case

CD-Series
The CD series mics are cost effective solutions designed for a wide variety of applications including music, karaoke, speech, presentations, worship and education. Rugged and road worthy, they each feature a cardioid polar pattern to minimize feedback, on/off switch, and an internal pop filter to control breath and wind noise. Each mic comes with 20’ mic cable, stand adapter and carry case.

CD-11:
Low impedance dynamic mic characterized with a very clear midrange vocal presence to suit portable sound systems. Includes XLR-XLR mic cable.

CD-11H:
A high impedance version of the CD-11 allowing it to be used with equipment such as guitar amps, recording tape decks and karaoke systems with high impedance inputs. Includes a XLR – 1/4” mic cable.

CD-21:
A step up to the next level of vocal performance, the stylish and compact CD-21 offers a wider frequency response and a rich, warm sound. Includes XLR-XLR mic cable.

<table>
<thead>
<tr>
<th>OM1</th>
<th>OM2</th>
<th>OM3</th>
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<td>144 dB</td>
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</tr>
</tbody>
</table>
AUDIX

CONDENSER MICS

VX-10

The VX-10 is a true condenser microphone designed to set new performance standards in live sound and broadcast applications—where sonic performance is everything.

◆ With a smooth uniform response over a frequency range of 40Hz -to- 20 kHz, the VX-10 is highly sensitive to transient response and will reproduce vocals and speech with exceptional detail and realism.

◆ Cardioid pattern provides excellent gain before feedback

◆ Runs on 48-52v phantom power

◆ While it provides high sensitivity and studio quality sound reproduction, the mic can also handle the very high sound pressure levels (up to 140 dB) of instruments.

◆ The VX-10 handles close miking with minimal proximity effect and will not lose signal if the user is slightly off-axis from the front of the microphone.

◆ Even with its extended low end response, the VX-10 offers sonic clarity without “boombiness” in the lower mids—usually difficult to attain with live vocals.

SCX-25

Studio Condenser Microphone

The SCX-25 is a compact, brass condenser microphone with an elegant design and a revolutionary patented capsule suspension system. Featuring a low-noise, high-output preamp and 1” gold sputtered diaphragm, this innovative mic delivers a pure, open-air sound that places it among the world’s finest—regardless of size or cost. The patented suspension-mounting system isolates the capsule from the housing and electronics, which minimizes acoustic reflections and diffraction. This phenomenal feat of engineering distinguishes the SCX-25 from all other mics—in fact it’s the closest thing to hanging the capsule in mid-air.

Expensive shock-mount clips are unnecessary and, with the mic’s compact size, setup time is significantly reduced. Ideal for recording a wide variety of acoustic instruments, vocals, and piano, the SCX-25 also thrives as an ambient room and field recording mic.

◆ With a smooth uniform cardioid frequency response from 20Hz-20kHz, the SCX-25 reproduces vocals and acoustic instruments with exceptional detail and realism.

◆ Employs miniaturized low noise components (preamp circuitry is housed in a brass microphone body 4” long). The result is the smallest footprint of any large diaphragm mic—allowing more convenience and freedom for mic placement.

◆ Very consistent when responding to incoming off-axis signals, exhibiting excellent phase coherence and minimal proximity effect.

◆ Operates on 48-52v phantom power

D-SERIES

The Ultimate Drum Mics

With the success and acceptance of the D-Series microphones, Audix is now the recognized leader in percussion microphones. Compact and lightweight yet featuring full size diaphragms, the D-Series mics employ exclusive Sub-Impulse Technology which allow them to pick up transients and nuances which substantially contribute to the accuracy and richness of the sound. The low mass of the diaphragm, coupled with a sensitive internal air suspension, allows the outer wall of the diaphragm to react to sound waves, harmonics, and sub-harmonics more quickly than other microphones. This results in a more precise sampling of the original sound. Furthermore, their tight hypercardioid pickup pattern allows clear definition of sound without the feedback problem commonly associated with placing multiple mics in close proximity.
AUDIX
D-SERIES

Microphones

D1
Snare Drum, Bongos, Flute, Hi-Hat, Clarinet, Cowbel

The D1 is characterized with natural articulation and attack in the upper mid-range and will complement instruments requiring crisp, clean reproduction. The D1 requires little or no EQ and provides great results when close miking techniques are employed.

D2
Rack Toms, Floor Toms, Congas

Designed to capture the warmth and punch of instruments with upper mid bass, the D2 is the perfect combination of attack and decay and can be successfully used with very little or no gating. With a wide dynamic range, the D2 can also be used on guitar cabs and saxophone.

D3
Timbales, Piccolo Snare, Trumpet, Electric Guitar

The D3 employs a unique low output gain stage which acts as a natural pad in order to compensate for instruments that would normally overload most mics. Characterized with a very flat and accurate frequency response, the D3 is perfect for extremely high SPL instruments with short blasts of percussive sound.

D4
Floor Toms, Kick Drum, Djembe, Bass Cabs, Piano, Saxophone

The D4 utilizes a new capsule design enabling it to capture instruments with extended frequencies below 100Hz. In fact, the D4 extends down to 38Hz! A remarkable feat for a microphone of this size and versatility. The D4 has not only great low end response, but is a full-range microphone making it an ideal choice for a wide variety of instruments. It is important to note that when using the D4 to mic a kick drum, it should be placed just slightly inside the hole on the front head. This will provide a warm, fat sound with plenty of punch.

D6
Kick Drum, Cajon

The D6 is designed for anyone looking for a huge, clean, undistorted kick drum sound. About twice the size of the normal D series microphone, it is still extremely easy to use and position. It utilizes the same low profile mounting clip as the D series mics, and it will work with the Dvice and D-flex clips, as well as a variety of other popular clips on the market. The D6 has a frequency response of 30 Hz - 15 kHz and is characterized with a cardioid pick-up pattern. The D6 is designed to sound good in any position and it is not dependent on finding the “sweet spot” of the drum. The D6 capsule features the same legendary VLM technology that has made the D series percussion and instrument microphones very popular for today's live stages and recording studios. Includes a cordura pouch and nylon mic stand adapter.

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>D4</th>
<th>D6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response (Hz)</td>
<td>46 to 18k</td>
<td>44 to 18k</td>
<td>50 to 19k</td>
<td>38 to 19k</td>
<td>30 to 15k</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated Impedance</td>
<td>250Ω</td>
<td>250Ω</td>
<td>150Ω</td>
<td>200Ω</td>
<td>200Ω</td>
</tr>
<tr>
<td>Open Circuit Sensitivity</td>
<td>2.4 mV</td>
<td>2.5 mV</td>
<td>1 mV</td>
<td>2.1 mV</td>
<td>2.2 mV</td>
</tr>
<tr>
<td>Maximum SPL</td>
<td>144 dB</td>
<td>&gt;30 dB</td>
<td>&gt;30 dB</td>
<td>&gt;30 dB</td>
<td>&gt;20 dB</td>
</tr>
<tr>
<td>Off-axis Rejection</td>
<td>&gt;30 dB</td>
<td>&gt;30 dB</td>
<td>&gt;30 dB</td>
<td>&gt;30 dB</td>
<td>&gt;20 dB</td>
</tr>
</tbody>
</table>

1 Pa + 94 dB SPL

ORDER & INFO. (212) 444-5088 • FAX: (212) 239-7770 (800) 947-7008
1-800-875-6951 • www.bhphotovideo.com
ADX-51

Overheads, Hi-Hat, Cymbals, Toys, Acoustic Instruments, Group Vocals

The ADX-51 is an affordable pre-polarized condenser microphone designed to handle a wide variety of live and studio applications. Characterized with a smooth uniform response over a frequency range of 40Hz - 20kHz, the ADX-51 is very versatile and can be used for a variety of instruments as well as overheads. The ADX-51 has the added value of a 10dB pad and a bass roll-off switch. Capable of 142dB sound pressure levels, the ADX-51 is ideal for hi-hat and applications with very high stage volumes.

ADX-60

Kick Drum, Piano, Plays

The ADX-60 is a pre-polarized condenser boundary microphone capable of a very wide variety of applications. With a frequency range of 50Hz - 18kHz, the ADX-60 provides a warm, full-bodied sound not typical of microphones this size. Housed in a heavy-duty zinc die-cast base with a low reflective black finish, the ADX-60 operates on phantom power and is supplied with an in-line preamplifier and 25’ mic cable. A boundary microphone is unique in that it picks up sounds that are parallel to the surface. This allows the ADX-60 to be placed on surfaces such as floors, the inside of a piano lid, or the inside of a bass drum.

D-Series Drum Packs

Audix Drum Packs are a matched collection of drum and percussion mics and clamps in an aluminum road case that let you take control of your sound at substantial savings.

Designed for both studio and live applications, Audix mics get you right to the heart of the mix with consistent, high-quality sound.

Each microphone consists of a VLM (very low mass) capsule housed in a precision-machined lightweight aluminum body. Their compact size, in conjunction with the D-Vice gooseneck clip, allows for quick and easy set-up and perfect mic placement. And there are four packages to choose from (the DP3 and DP Elite also include condenser mics). So whether you are a performing artist or an engineer, there is a package designed for you.

<table>
<thead>
<tr>
<th>Package</th>
<th>D-1</th>
<th>D-2</th>
<th>D-4</th>
<th>D-Vice</th>
<th>Road Case</th>
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<tbody>
<tr>
<td>DP2</td>
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<td>2x</td>
<td>1x</td>
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<tr>
<td></td>
<td>D-1</td>
<td>D-2</td>
<td>D-4</td>
<td>D-Vice</td>
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<td>DP3</td>
<td>1x</td>
<td>2x</td>
<td>1x</td>
<td>2x</td>
<td>1x</td>
</tr>
<tr>
<td></td>
<td>D-1</td>
<td>D-2</td>
<td>D-4</td>
<td>ADX-51</td>
<td></td>
</tr>
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<tr>
<td>DP5</td>
<td>1x</td>
<td>2x</td>
<td>1x</td>
<td>1x</td>
<td>1x</td>
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<tr>
<td></td>
<td>D-1</td>
<td>D-2</td>
<td>D-4</td>
<td>D-6</td>
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<tr>
<td>DP ELITE</td>
<td>1x</td>
<td>2x</td>
<td>1x</td>
<td>2x</td>
<td>1x</td>
</tr>
<tr>
<td></td>
<td>SCX1-c (cardioid)</td>
<td>SCX1-hc (hypercardioid)</td>
<td>D-Vice</td>
<td>Road Case</td>
<td></td>
</tr>
<tr>
<td></td>
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</tbody>
</table>
| Fusion Series Drum Packs

Fusion series mics effectively capture the sound of any drum or percussion instrument. Built to withstand the rigors of live stage applications, they can also be successfully used in a studio recording environment. The two packages are available complete with a foam padded road case. The F-10 and F-12 mics come with integral mic clips, and the F-15 mics come with mic stand adapters.

<table>
<thead>
<tr>
<th>Fusion 4</th>
<th>Fusion 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>3x F-10 snare/tom mics</td>
<td>3x F-10 snare/tom mics</td>
</tr>
<tr>
<td>1x F-12 kick/floor tom mic</td>
<td>1x F-12 kick/floor tom mic</td>
</tr>
<tr>
<td>1x Durable road case</td>
<td>2x F-15 overhead mic plus 2 clips</td>
</tr>
<tr>
<td></td>
<td>1x Durable road case</td>
</tr>
</tbody>
</table>
**Micro-D**

The Micro-D is a miniature electret condenser microphone that is very low profile and is exceptionally easy to use. The unique design works for a wide variety of applications including drums and percussion, guitar cabinets, cymbals, speech, vocals, and acoustic instruments. Available with three different types of specialized clips and two different types of capsules, the Micro-D becomes a modular system that can fulfill a multitude of creative miking needs.

The Micro-D comes equipped with a phantom power adapter, D-vice spring tension gooseneck clip, windscreen, carrying pouch, and thread adapter. The D-vice is ideally suited for mounting to the rims of most drums. The thread adapter allows the Micro-D to be used with normal mic and boom stands.

- Basic version has a hypercardioid pick-up pattern and is capable of handling sound pressure levels of 140 dB
- The mic is housed in a protective aluminum ring and isolated by means of a rubber shock mount system

**SCX1 Series**

The SCX1 Series high-quality transformerless condenser microphones have exceptional performance value in both studio and sound reinforcement applications. The SCX1-c has a cardioid pattern and is designed for overheads, acoustic instruments, choir, and room miking. If more isolation is required, the SCX1-hc, a hypercardioid mic, will provide excellent focus and gain before feedback.

The SCX1-o is an omnidirectional mic, optimized for recording, room miking, and measurement. A true condenser, requiring 48-52v phantom power, the SCX1 Series will provide audio detail beyond your expectations.

**Micro-D**

A new solution for drum miking, D-Vice will eliminate drummer’s concerns about microphone positioning. The D-Vice has a low profile and unique mounting system that allows precise positioning and attachment (using only one hand) to the rim of most drums and rimmed percussion. Precision molded out of composite material, the patent pending D-Vice can easily accommodate any 5/8” microphone clip. Works with the Micro-D and D-series mics...

24.99

**D-Clamp**

A tension clamp for the Micro-D and D-Series, the extra long metal gooseneck allows precise mic placement on congas, bongos and percussion lugs. Also interchangeable with D-Vice gooseneck for modular use... 

24.99

**D-Flex**

A dual pivot clip with extra wide jaws, D-Flex insures that your M or D-Series mic is positioned perfectly. It also minimizes vibration and unwanted resonances...

13.95

**ADX-20i**

The ADX-20i (cardioid) is an electret condenser mic that is designed to handle a wide variety of clip-on applications. Sonically superior as well as aesthetically pleasing, the ADX20i is perfect for saxophone, trombone, trumpet and other brass instruments.

- Smooth frequency range of 40 Hz - 20 kHz provides a rich, warm sound not typical of a microphone this size.
- Machined from solid brass with a low reflective black e-coat finish.
- Operates on phantom power (9-52v) with the preamp module provided (APS-910). It can also be used in battery mode with the APS-911 adapter.

13.95

**ADX-20i**

Includes shock-mount adapter
BEYERDYNAMIC

DYNAMIC VOCAL MICS

Founded in 1924 by Eugene Beyer, Beyerdynamic is the oldest audio company in the world that remains under its original ownership. Interestingly, Eugene was best friends with George Neumann, and the two legends actually started together in business. But they soon discovered that each had his own ideas with respect to transducer designs. So shaking hands, it was agreed that George Neumann would only produce condenser transducers, while Eugene Beyer would produce only dynamic capsules. This agreement remained in place until the mid-1970’s, after they both passed away. Today of course, Beyerdynamic is known not only for the quality of its dynamic mics but condenser and ribbon mics, wireless products, and headsets.

TG-X 58
Hypercardioid Dynamic Vocal Mic

The TG-X 58 is designed for vocals as well as the miking of instruments. It can be used as a handheld or used on a stand. Hypercardioid pattern provides high gain before feedback. The mic barrel is finished with a soft lacquer coating which makes the microphone very comfortable to hold in the hand. The TG-X 58 also features an integrated pop shield which reduces "pop" noise associated with close vocal miking. The On/Off switch can be locked into position to avoid accidental switching off. Built to withstand serious abuse during live performances. Includes mic clamp and bag.................................................................67.50

TG-X 60
Hypercardioid Dynamic Vocal Mic

The TG-X 60 is a very high quality dynamic microphone intended for use handheld or stand-mounted by lead vocalists, particularly in rock bands where maximum volume before feedback is required. It also has the ability to withstand high sound pressure levels, making it suitable for close miking of musical instruments or speaker cabinets. Dubbed the ultimate “Rock n’ Roll” microphone, the TG-X60 is ruggedly constructed and has a shock absorbing rubber ring to withstand touring damage.................................................................279.95

M 69 TG
Hypercardioid Dynamic Vocal Mic

In service for almost thirty years, the M 69 TG has been used in just about every application possible. A classic all-around mic with a superb response characteristic, the M 69 TG makes the human voice sound real, be it spoken or sung, chanted or shouted. The unique shape and sound of the M 69 TG coupled with high SPL capability, makes it a natural choice for the recording of guitars, brass and woodwind as well. Ideal for live applications, it has an excellent hypercardioid pickup pattern that guarantees high gain before feedback, while a reinforced basket allows it to withstand rough handling. Also well suited for sound contractors for use in churches or as an announcer’s microphones.............189.95

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>TG-X 58</th>
<th>TG-X 60</th>
<th>M 69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Principal</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Frequency Response (Hz)</td>
<td>50 to 15k</td>
<td>44 to 18k</td>
<td>50 to 19k</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>HH</td>
<td>HH</td>
<td>HH</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>600Ω</td>
<td>250Ω</td>
<td>150Ω</td>
</tr>
<tr>
<td>Open Circuit Sensitivity at 1 kHz</td>
<td>2 mV/Pa ± 1.5db</td>
<td>2.5 mV</td>
<td>1 mV</td>
</tr>
</tbody>
</table>
High Performance Instrument and Vocal Mics

The Opus range of microphones is a cohesive family of products optimized for music performance. Combining cutting-edge microphone technology, 21st century materials and over 75 years of transducer design and development, beyerdynamic has created a complementary range of microphones that capture the dynamism of music performance, new music styles and spontaneous creativity—on stage or in the studio. The Opus series includes a full range of popular microphone types and is designed to take the mystery and luck out of choosing the right type. All microphones are made in Germany from the highest quality materials and tested to the most rigorous standards.

<table>
<thead>
<tr>
<th>Microphone</th>
<th>Element Type</th>
<th>Operating Principle</th>
<th>Frequency Response (Hz)</th>
<th>Polar Pattern</th>
<th>Maximum SPL at 1kHz</th>
<th>Signal-to-Noise Ratio rel. to 1 Pa</th>
<th>Nominal Impedance</th>
<th>Open Circuit Sensitivity at 1 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opus 39</td>
<td>Dynamic</td>
<td>Pressure gradient</td>
<td>50 to 16k</td>
<td></td>
<td></td>
<td></td>
<td>600Ω</td>
<td>2.4 mV/Pa</td>
</tr>
<tr>
<td>Opus 59</td>
<td>Dynamic</td>
<td>Pressure gradient</td>
<td>45 to 16k</td>
<td></td>
<td></td>
<td></td>
<td>600Ω</td>
<td>2.6 mV/Pa</td>
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<tr>
<td>Opus 69</td>
<td>Dynamic</td>
<td>Pressure gradient</td>
<td>35 to 16k</td>
<td></td>
<td></td>
<td></td>
<td>290Ω</td>
<td>2.5 mV/Pa ± 1.5 dB</td>
</tr>
<tr>
<td>Opus 81</td>
<td>Condenser</td>
<td>Pressure gradient</td>
<td>50 to 18k</td>
<td></td>
<td></td>
<td></td>
<td>190Ω</td>
<td>3.2 mV/Pa</td>
</tr>
</tbody>
</table>

Opus 39
High Performance Dynamic Mic
A high performance, general purpose dynamic mic, the ruggedly constructed Opus 39 is ideal for live-performance vocals, close musical instrument pickup and club PA. It offers a flat, wide range frequency response for uncolored sound reproduction, while its supercardioid pattern provides excellent isolation from unwanted sound. Mic handle is soft-lacquered for comfort and grip.

Opus 59
High Performance Dynamic Mic
A high performance dynamic microphone for professional vocal use in live performance, the Opus 59 features a high output Neodymium magnet and extended high-frequency response tailored for vocals. Supercardioid pattern provides high gain before feedback and excellent isolation from unwanted sources. Soft-lacquered for comfort and grip. Rugged all metal body and legendary Beyerdynamic quality guarantee years of service.

Opus 69
High Performance Dynamic Mic
A singer’s dream, the Opus 69 delivers spectacular vocal reproduction. A wide, uncolored frequency response and warm proximity effect, gives the performer the ability to create a sonically unique style. Remarkable response and tightly controlled hypercardioid pattern enhances usable gain before feedback while rejecting off-axis sound sources, producing a crisp, natural sound.

Opus 81
High Performance Condenser Mic
Advanced technology and extraordinary engineering has produced this state of the art condenser condenser microphone. The Opus 81 can be used on the stage or in the studio. The condenser element withstands sound pressure up to 138 dB SPL without a loss of performance.
Opus 53
High-Quality Condenser Instrument Mic
The Opus 53 is a high-quality condenser microphone at a reasonable price. It consists of a light-weight, but rugged, plastic casing strengthened with carbon fibers. Its small and short design allow flexible and unobtrusive positioning. The frequency response has been optimized for universal miking of instruments. In particular it is suitable for miking drums such as snare or hi-hat. But it is also a great microphone for miking brass and wood winds instruments.

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>OPUS 53</th>
<th>OPUS 51</th>
<th>OPUS 83</th>
<th>OPUS 65</th>
<th>OPUS 64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Principal</td>
<td>Pressure gradient</td>
<td>Pressure gradient</td>
<td>Pressure</td>
<td>Pressure gradient</td>
<td>Pressure gradient</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>30 to 20k</td>
<td>30 to 20k</td>
<td>40 to 20k</td>
<td>15 to 18k</td>
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<tr>
<td>Polar Pattern</td>
<td>O</td>
<td>O</td>
<td>(O)</td>
<td>(O)</td>
<td>(O)</td>
</tr>
<tr>
<td>Maximum SPL at 1kHz</td>
<td>136 dB (48v)</td>
<td>131 dB</td>
<td>138 dB</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio rel. to 1 Pa</td>
<td>64 dB</td>
<td>26 dB</td>
<td>60 dB</td>
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<td>—</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>200Ω</td>
<td>250Ω</td>
<td>190Ω</td>
<td>280Ω</td>
<td>200Ω</td>
</tr>
<tr>
<td>Open Circuit Sensitivity at 1 kHz</td>
<td>2.4 mV/Pa</td>
<td>7 mV/Pa</td>
<td>3.2mV/Pa</td>
<td>2mV/Pa</td>
<td>1.5mV/Pa</td>
</tr>
</tbody>
</table>

Opus 51
Acoustical Boundary Condenser Mic
Designed for instrument sound reinforcement. Using its boundary effect, the Opus 51 captures direct and reflected sounds from an instrument in perfect balance and at an equal level, taking the guess work out of mic placement. Ideal for capturing the full sound within an instrument, such as the piano. The Opus 51 captures all of the piano’s subtle overtones and nuances, producing a natural sound and conveying the emotion of the performance.

Opus 65
Kick Drum Microphone
Only a special large diaphragm dynamic mic can reproduce the low frequency energy created by kick drums, congas and timpani. The Opus 65 combines a 1.5” diameter diaphragm with a powerful neodymium magnet to effortlessly capture and reproduce low frequency signals and harmonics — requiring little or no EQ. Though primarily designed for close miking of the kick drum, it is also well-suited for floor toms, bass drum etc. Ability to withstand extremely high sound pressure levels allows it to be used for close miking of musical instruments or speaker cabinets.

Opus 64
Headworn Microphone
Designed for “hands free” applications that require a high quality and lightweight microphone, the Opus 64 is ideal for entertainers, dancers, drummers and keyboard players etc. It interfaces with wireless systems to provide a low profile neckworn microphone for aerobics instructors, sales and product presentations. Its hypercardioid polar pattern allows a high gain before feedback. The Opus 64 features a rugged yet adjustable headband that can be shaped for personal comfort with a secure fit. The microphone can be worn on the left or right side of the headband. To interface with the TS 100 beltpack transmitter the Opus 64 has been equipped with a mini jack plug (3.5 mm).

www.bhphotovideo.com
Opus 62 Hypercardioid Dynamic Wind Instrument Microphone

The Opus 62 is a high performance, low profile clip-on dynamic mic designed for miking wind instruments such as trumpets, trombones and saxophones. The capsule is attached to a 4” gooseneck and is externally shock isolated to prevent excessive transient response. Neodymium element provides increased output, while a tight polar pattern enhances off-axis noise rejection. The flexible gooseneck ensures optimal positioning.

- For miking trumpets, trombones, and saxophones
- Clip ensures solid and easy mounting to the instrument
- Hypercardioid pattern ensures high gain before feedback
- Flexible 4” gooseneck for optimum positioning
- Small and rugged construction
- Supplied with bag
- Frequency range: 40 Hz to 12 kHz

Opus 67 Hypercardioid Dynamic Drum & Percussion Microphone

The Opus 67 is a dynamic microphone designed for close miking of drums such as snare and toms and percussion such as congas and bongos. The mic's hypercardioid polar pattern achieves very high gain before feedback while the flexible gooseneck ensures optimal positioning to suit both musician and sound engineer.

- For miking toms, snare, congas and bongos
- Very high gain before feedback
- High SPL capability
- Flexible gooseneck for optimal positioning
- Small, ruggedly constructed for on-tour applications
- Frequency response: 40 Hz to 12 kHz

Opus 66 Dynamic Supercardioid Drum & Percussion Microphone

The Opus 66 is a small and ruggedly constructed percussion microphone perfect for miking snares, hi-hats and rack-toms. It rejects mechanical and handling noise making it ideal for mounting on drum hardware. The mic mount ensures optimal positioning to suit both musician and sound engineer. Also has a 3/8” (5/8”) thread for mounting on a conventional mic stand if required.

- For miking snare, hi-hat and rack-toms
- Extra stiff Macrolon diaphragm ensures exact reproduction or percussion and drums
- Excellent transient behavior
- Extremely high SPL (140 dB)
- Supplied with special mic mount and bag
- Frequency response: 40 Hz to 12 kHz

Opus 87 Cardioid Condenser Drum & Percussion Microphone

The Opus 87 is a superb electret back condenser mic for miking drums. It features a patented microphone clamp with integrated pre-amp that is an absolute innovation. The microphone capsule is mounted on a short gooseneck allowing optimum positioning. Ruggedly constructed the mic can withstand the worst abuse. Includes a case.

- Ideal for snare and toms
- Cardioid pattern with high gain before feedback
- Innovative mic clamp with integrated preamp
- Runs on 12-48v phantom power
- Maximum SPL of 136 dB
- Frequency response: 30 Hz to 20 kHz

Opus 82 Cardioid Condenser Wind Instrument Microphone

Ruggedly constructed, the Opus 82 is an electret condenser microphone for miking brass instruments. Its clip ensures a solid mounting to the instrument, while the flexible 4” gooseneck allows optimum positioning. Unwieldy mic stands are no longer needed. Cardioid polar pattern ensures the Opus 82 achieves high-gain-before feedback.

- For miking trumpets, trombones, and saxophones
- Cardioid pattern ensures high gain before feedback
- High SPL capability (135 dB)
- Flexible 4” gooseneck for optimum positioning
- Runs on 12-48v phantom power
- Supplied with CVU 82 fixed preamp and bag
- Frequency range: 30 Hz to 20 kHz
**MCD-100/MCD-101**

**Cardioid and Omnidirectional Digital Microphones**

Equipped with a 24-bit analog-to-digital converter placed immediately behind their capsule, the MCD-100 and MCD-101 offer the optimum conversion of an analog signal into the digital domain. As a result they are able to provide a flawless reproduction of the mic capsule’s dynamic range and frequency response. To accept 6-10v digital phantom powering and to facilitate connection to a digital console, a separate power supply (MPD-200) is available as an option. For high SPL applications up to 140 or 150dB a remote attenuator (-10/-20 dB) controlled from the MPD-200 is provided. And since they are digital, they can allow very long cable runs (up to 1000’) without signal degradation. Digital output is AES/EBU.

**MCD100 Digital Cardioid Condenser Mic with MKV-11 mic clamp**

- **MCD100 Set** (includes MCD 100, MPD 200 Power Supply, EA 37 Elastic Suspension and ZMK-6 Case)
- **MCD100 Stereo Set** (includes 2 MCD 100’s, MPD 200 Power Supply, 2 EA 37 Elastic Suspensions and ZMK-6 Case)
- **MCD101 Digital Omnidirectional Condenser Mic with MKV-11 mic clamp**

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**MC-740**

**5-Pattern Condenser Mic**

With five polar patterns (omni, cardioid, wide cardioid, hypercardioid, figure-8), the M C-740 can be adapted to a variety of recording situations in the studio—while capturing every sound detail with absolute clarity and purity. The M C-740’s double diaphragm capsule is characterized by a frequency response that remains constant in all patterns. Switchable 10 dB pad allows close miking of instruments up to 144 dB SPL. Also has a two-position low-frequency roll-off (80 and 160 Hz). Use for choir recordings, for vocals, wood and brass wind instruments, piano and string instruments, even as an overhead mic for percussion instruments. Includes MKV-11 mic clamp, EA-37 external suspension mount and case.

**MC-834 Condenser Mic**

A true condenser large diaaphragm cardioid mic, the M C-834 has a wide range, natural frequency response that makes it ideal for a host of applications. Equipped with a large diameter gold vaporized membrane element, it features exceptional S/N ratio and high SPL capability (up to 150dB with the switchable -10/-20 dB pad). Cardioid pattern allows high gain before feedback. To adjust for proximity effect or extraneous low frequency sounds, the mic offers a three position low-frequency roll-off: LIN (flat, with no roll-off) and 6 dB per octave below 80 or 160 Hz. Use for lead and back up vocals, voice-overs, miking of pianos, strings and brass instruments, and home recording. Includes EA 37 ext. suspension mount.
M 130
Bi-Directional Ribbon Mic

The M 130's unique double ribbon element has superb transient response, creating a highly detailed sound with unequalled accuracy and transparency. The bi-directional figure-8 pattern effectively suppresses unwanted interference from the sides. The M 130's balanced, uncolored sound handles a wide variety of applications. In conjunction with the hypercardioid M 160, the M 130 is ideal for creating an authentic stereo image through the use of the M-S (Mid-Side) technique. Use for digital recordings, ambient miking, piano, harpsichord, harp and strings.

M 160
Hypercardioid Ribbon Mic

The M 160 is a dynamic ribbon microphone with an extremely tight polar pattern and extended frequency response that is ideal for stringed instruments. The M 160's hypercardioid characteristic with a noise cancellation of 25 dB at 110° effectively suppresses lateral sound reflections and external noise. Recommended for picking up the sound of stringed instruments such as violins, violas and cellos as well as for zithers and dulcimers. The mic's black chromium plating and compact size makes it very popular in TV and film studios. Use with the M 130 to create an authentic stereo image via the M-S (Mid-Side) technique.

MCE 91
Condenser Vocal Microphone

A handheld cardioid condenser microphone, the MCE 91 delivers high output with very low self-noise making it ideal for recording in the studio or at home. A faithful purveyor of the human voice, the MCE 91 has a linear frequency response curve that has been optimized for clear and neutral voice reproduction. It also has a sophisticated elastic transducer suspension system that ignores heavy-handed vocalists, and can reproduce high pressure sound levels of up to 139 dB to handle even the most passionate arias. Includes MKV-8 mic clamp and padded bag.

MCE 90
Condenser Vocal Mic

A project studio multi-purpose microphone, the MCE 90 features a linear frequency response, switchable controls to vary functionality, and is constructed in a rugged die-cast housing. Easily handles high sound pressure levels up to 139 dB without pre-attenuation and up to 154 dB with the pad. If necessary, low frequency noise can be attenuated with switchable LO-CUT filter.

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>M 130</th>
<th>M 160</th>
<th>MCE 91</th>
<th>MCE 90</th>
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<tr>
<td>Operating Principal</td>
<td>Pressure Gradient</td>
<td>Pressure Gradient</td>
<td>Electret Condenser</td>
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<tr>
<td>Maximum SPL at 1kHz</td>
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</table>
**BEYERDYNAMIC**

**STUDIO MICS, continued**

**MC 833**
**Stereo Condenser Mic**

The MC 833 is a general purpose stereo condenser microphone that offers true MS, XY, and stereo recording without an additional matrix. The mic is equipped with three true condenser systems. The polar pattern of each cartridge is cardioid and almost independent of the frequency.

The middle system supplies the mono signal or the M signal with MS stereophony. The system located to the left and right of the middle system are switched together to form a figure-8 polar pattern and supply the S signal.

At XY stereophony only the two side systems are used. They can be mechanically adjusted. Therefore, at XY recording the recording angle can continually vary over a large range. Includes EA-833 elastic suspension, MKV-11 mic clamp and a case.

**MCE 82**
**Stereo Mic for X-Y Recording**

The MCE 82 is a stereo microphone for X-Y recording. It is used for stereo recording in ENG/EFP applications, reporting, film, video and interviewing. The MCE 82 has two condenser capsules with cardioid polar patterns, which are mounted at an angle of ±45° of the microphone axis. This allows a wide recording range and an accurate reproduction of the sound source.

It has a flat linear frequency response for neutral miking with the highest sound quality.

Due to its compact and rugged metal housing, the MCE 82 is ideal for mobile applications. The elastic suspension of the capsule suppresses handling and cable noise. A switchable bass filter eliminates wind noise and rumble. Runs on 12 to 48v phantom power or a 1.5-volt AA battery. Also has a LED battery indicator. Includes MKV-82 mic cable.

**INTERVIEW MICROPHONES**

**M58 Omnidirectional Dynamic Microphone**

The M 58 is designed specifically for electric news gathering (ENG) and electronic field production (EFP) applications. Its sophisticated internal shockmount dramatically reduces handling noise, while the mic’s frequency response is tailored to provide broadcasters with a very accurate and intelligible sound. The M 58’s weight-balanced design provides journalists with a high degree of comfort during lengthy interviews. Its rugged construction enables the mic to withstand physical and environmental punishment typically encountered during field production operations.

Slim profile and non-reflective Nextel finish result in a low profile on camera. Includes WS-58 windscreen.

**M59 Hypercardioid Dynamic Broadcast Mic**

The M 59 is a rugged, vocal quality dynamic mic designed to withstand the critical demands of in-studio or on-location ENG/EFP speech and interview work. In addition, it has a low mass, large diaphragm Macrolon element and hypercardioid pattern to provide very fast transient response, high output and high sensitivity, with startling accurate reproduction of the sound source while also providing excellent off-axis rejection.

The M 59 uses a sophisticated internal shock-mount isolation system to reduce stand, boom, or handheld noise and vibration. Durable construction and non-glare Nextel finish provide consistent protection against the rigors of ENG/EFP work. It also incorporates an internal multi-stage blast filter to reduce undesirable wind or pop noise. An optional windscreen is also available. With high gain before feedback, it is ideal for lecterns or miking of wind instruments. Includes MKV-8 mic clamp.

**MCE58 Omnidirectional Condenser Microphone**

The MCE 58 condenser microphone has been specially developed for interviewing and broadcasting. Its unbalanced output supplies a very high level which allows direct connection to mobile DAT and MiniDisc machines. The elasticated suspension of the transducer element eliminates unwanted handling noise and built-in active filters suppress unwanted low frequency noise such as traffic rumble. The MCE 58 has a frequency response curve which has been optimized for excellent intelligibility of speech. The non-glare Nextel surface is scratch-resistant and will withstand the rough use often associated with news gathering events. Includes AA battery and MKV-8 mic clamp.
**SHOTGUN MICROPHONES**

**MCE 86/86S • MCE 87/87VS**

**Short Shotgun Mics**

The MCE 86 and MCE 87 are short shotgun microphones designed to meet the rigors of studio and on-location assignments in broadcasting. They can be used with a pistol grip, on a fishpole boom or on cameras and camcorders. Their condenser element and hypercardioid/lobe polar pattern provide high sensitivity, excellent off-axis rejection and accurate reproduction of each sound source.

Their rugged design and integrated filter make them insensitive to wind and vibrations. For greater flexibility, they can be fed with 8-48v phantom power. If phantom power isn’t available, the battery/phantom powered version MCE 86S or the battery-powered MCE 87S can be used. The MCE 87VS can be powered directly by the camcorder, if an output for external devices is provided (5-9v, 2.5 mm jack plug). The balanced output of the MCE 86 enables the use of long cables. The output of the MCE 87 is unbalanced. The MCE 87 is extremely insensitive to interference caused by view finders.

Available with two elastic suspensions: the EA 19/25 with the MKV 11 microphone clamp for fishpole booms and stands or EA 86 with horseshoe connection for the use on video cameras.

- MCE86 with EA86 elastic suspension and mounting kit........364.95
- MCE86S (same as above, plus On/Off switch).................374.95
- MCE87VS with EA19/25 suspension and MKV-11 mic clamp........394.95
- MCE87S Battery powered (switchable); with EA86 and mounting kit 348.95
- MCE87VS Powered by camera; with EA86 and WS716 windscreen ....279.95

**MC 836 / MC 837 Shotgun Mics**

The rugged and lightweight MC 836 (Lobe/Cardioid polar pattern) and MC 837 (Lobe pattern) shotgun microphones have been designed to meet the demands of ENG and EFP applications. Due to their acoustical characteristics they are also suited for studio, film and theatre applications. The directional polar pattern helps to suppress lateral and background noise.

Both mics operate according to the pressure gradient/line transducer technique. A switchable low frequency roll-off eliminates unwanted low frequencies at a cut-off frequency of 90Hz. An integrated footfall sound insulation avoids the transmission of noise below 40 Hz. To avoid wind noise when used outdoors, a wind shield is needed. Both run on 11-52v phantom power.

**MC 836 / MC 837 Shortgun Mics**

- **Transducer Type**: Condenser
- **Frequency Response**: 50 to 18k
- **Polar Pattern**: Hypercardioid/Lobe
- **Maximum SPL at 1kHz**: 138 dB
- **Signal-to-Noise Ratio rel. to 1 Pa**: 61 dB
- **Nominal Impedance**: 1900Ω
- **Load Impedance**: 1000Ω

**MIC ACCESSORIES**

- **Fishpole Booms**
  - MZA-716: 4-piece fishpole boom in matte black with swivel joint MZG-2 for mounting the mic at any desired angle. The pickup direction can be varied within 360° simply by turning the fiber glass tubes. Fitted with 3.8” thread for microphone clamps of flexible mounts (with EA 19/25 shock mount). Working length (extended) is 10’, collapsed length is 3’. Weighs 1.3 lbs.........................258.95
  - MZA-717: 2-piece light fishpole boom made of matte aluminum. Adjustable from 2” to 5”..........................108.95
  - MZA-718: 3-piece light fishpole boom made of matte aluminum. Adjustable from 3” to 10.5”........................163.50

- **Shock Mounts**
  - EA 19/25 Elastic Suspension for the M 59....49.95
  - EA-37 Elastic Suspension for the MD-100 and MCD-101........59.95

- **Windscreens**
  - WS-59 Charcoal-gray. For M 59..............28.95
  - WS-91 Charcoal-gray. For M CE-58.............Call
  - WS-716 Charcoal-gray. For M CE-86, MCE-87, M C 836................35.95
  - WS-717 Charcoal-gray. For M C 837............64.95
  - WS-740 Charcoal-gray. For M CD-100, MCD-101, M C-740, M C-834....34.95
  - PS-740 Black Popscreen for MCD-100, MCD-101, M C-740, M C-834......67.50
  - WJ-726 Windjammer for MCE-86/87...........Call

- **Mic Accessory Kit**
  - KWS-833 Set: Includes basket-type windscreen, elastic suspension and pistol grip for the M C 833........................................Call
  - KWS736/836 Set: Consists of KWS726/826 basket-type windscreen, EA736/836 elastic suspension and MZP767/867 Pistol Grip for the MC836/MC837.................................Call

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**BLUE BOTTLE**

**Tube Condenser Mic with Interchangeable Capsules**

A classic modern vacuum tube microphone, the Bottle is a precision recording tool that combines the low noise and superb transient response of top grade electronics with the sonic magic of legendary vintage vocal microphones. With eight different interchangeable capsules the Bottle is not just a microphone, but a complete mic system. In an instant, capsules can be changed to deliver different tonality, patterns and uses while the mic is still turned on—eliminating the need for multiple mics. The Bottle mic incorporates the EF86 pentode (used in triode mode) and is packaged with one B6 Lollipop capsule, a power supply with Soft Start and a Champagne tube mic cable all housed in a Blue velvet lined ATA approved flight case. So if there is a large orchestra tuning up, a legendary singer about to record, or an impromptu gathering of famous musicians and there is no room for failure— you want the Bottle— you want only the best.

- The ultimate in hand built craftsmanship, Class A discrete circuitry, integrated capsule shock mounting, custom wound mic transformer, hand-tuned and tested.
- The Bottle is huge — 14.75” and 4 lbs.
- EF86 pentode (used in triode mode) and a custom-built output transformer can
- Choice of eight interchangeable capsules, completely hand-built and individually voiced. The eight lolly popshaped capsule heads for the Bottle mic are:

  **B0:** Cardioid, large diaphragm— superior bright, silky, and intimate presence
  **B1:** Cardioid, small diaphragm— accurate sound with detailed high end
  **B2:** Figure 8, large diaphragm— big, warm sound of vintage ribbon mic
  **B3:** Cardioid, midsize diaphragm— very transparent, neutral sound
  **B4:** Perspex sphere pressure omni (like on the Neumann M 50)— sweet highs, robust lows, unique design and sound perfect for ambient recordings
  **B5:** Presence Omni, large diaphragm— very unique compressed quality, accentuated lows and highs
  **B6:** Cardioid, large diaphragm— dual back-plate (like an AGK CK-12). “Larger than life” sound with enhanced lows and high frequency presence
  **B7:** Cardioid, large diaphragm— single back-plate (like a Neumann M 7). Classic vintage tube detail in mids and airy presence.
- Power supply has a SOFT START feature to assure the longevity of the vacuum tube, and the stability of the mic circuitry. First it turns on the heater. After approx. 80 seconds — when the cathode is fully heated — the plate voltage is gradually applied and the microphone output is muted. After about three (long) minutes, when the mute has settled into its correct operating mode, the muting is disabled and audio is output from the supply.
- Although optimized for 60v, one can step it up to 90v or down to a minimum of 34v. This is useful for matching the sensitivity requirement of different program material; it also changes the sound of the mic from most aggressive (at higher voltages) to mellow and laid-back (at lower voltages).

**CACTUS**

**Multi-Pattern “Vintage Sound” Tube Mic**

A blend of the past with the cutting-edge of the future. With detailed information in the mid-range area and a soft silky response in the top-end, Cactus fills the need of detailing and mellowing the program material. Ideal for vintage pop vocal, brass, and electric guitar.

- Multi-pattern condenser-omni, cardioid, figure-8
- Vintage tube and Class A discrete circuitry
- Blue's famous hand-built large diaphragm capsule
- Vintage sound— rich lows, detailed mid-range, silky presence in the highs
- Integrated capsule shock mounting; mic hand-tuned and tested
- Includes premium quality Cactus power supply with SOFT START, Champaigne tube mic cable, Series 1 shock/pop integrated shock mount and pop filter, and ATA-style storage case
Multi-Pattern Studio Condenser Mic
Blue’s top of the line Class A Discrete model, the Kiwi (like the Cactus) has three capsule patterns (Cardioid, Figure-8, Omni) and selections in between for a total of nine different choices. This is achieved in a careful, unique manner using the BLUE double backplate capsule. Mounting to the Kiwi microphone amplifier is provided by a mold injected rubber stem to help isolate unwanted rumble. Additional protection from low end rumble is provided by the use of the elastic spider type shockmount. This microphone provides the recordist’s with many options for the most critical of all recordings. Ideal for silky lead vocal, piano, and multi-pattern recording.

- The capsule is modeled after the B6 capsule used in the Bottle mic but in a multi-pattern version using the same large-diaphragm, dual-backplate design. A switch on the back provides settings for cardioid, omni and figure-8, as well as three intermediate settings for each (nine patterns total).
- A wide, smooth presence boost that starts at about 6.5 kHz with a +3dB peak around 12 kHz that’s particularly nice on male lead vocals and adds a nice airiness to male and female background tracks.
- Kiwi’s attractive green body houses modern, transformer-less electronics — Class A, all-discrete design (no ICs), using high-quality components such as metal film resistors. The approach is minimalist; the signal path has no attenuation pads or low-cut filters that could compromise the signal.
- Modern sound—rich lows, contoured mid-range, extra airy presence in the highs. Adds punch, clarity and a low-end warmth on spoken and singing tracks — a trait that male and female vocalists will appreciate.
- In addition to the outboard shock-mount, Kiwi’s capsule is mounted on a rubber stem, providing near-total isolation from external vibration and rumblings.
- Includes “The Shock,” a robust elastic shock-mount and a cherry-wood storage box. Kiwi Cable and a stainless steel pop filter are available as options.

MOUSE Cardioid Studio Condenser Mic
The Mouse mic amplifier consists of top grade quality components such as polystyrene condensers and metal film resistors. The single pattern, cardioid handbuilt capsule uses only the highest quality mylar film and is sputtered with a special mixture of 24 karat gold (99.99%) of absolute pure quality and aluminum. The mic capsule is shockmounted in two areas, internally in the grill assembly and within the rotating grill armatures. Finished in a dark royal blue, the Mouse uses a transformerless circuit design. However, a transformer-based (matte black finish) Mouse is available as well, allowing the use of extra long mic cables for special applications while providing the utmost protection from outside interference such as RF. Both include a cherrywood storage box.

- Multi-purpose mic ideal for broadcast vocal, lead vocal, voice-over, bass amp, and kick drum.
- Big sound—robust lows, contoured mid-range, and an airy presence in the highs.
- Integrated suspension shockmount and rotating head for optimal placement.
- Optional accessories include “The Shock” shock mount, “The Pop” pop filter and Cranberry cable
The Blueberry consists of a Class A discrete mic amplifier perfectly chosen to the handbuilt, large-diaphragm, cardioid pattern capsule. BLUE's entry level microphone, The Blueberry is designed to fill the needs of the home musician and professional alike. The timbre of the microphone capsule has been tuned to provide the end user with a silky bright and airy top end reminiscent of the best vintage microphones. This provides the engineer with a recorded signal, such as a vocal, minus unwanted low end resonates that can cause a compressor to breathe or pump. The final results are vocals and instruments that sit and blend with the basic track of recorded program material.

- Intimate sound—tight lows and mids, contoured top end for superior air presence in the highs
- Multi-purpose mic that is ideal for lead vocal, acoustic guitar and backing vocal
- Hand tuned and tested
- Includes cherrywood storage box, optional accessories include the Series 1 Shock/Pop, Series 2 Shockmount and Blueberry cable

DRAGONFLY

Complete with an integrated elastic shockmount, this class A discrete, transformerless microphone offers a rotating capsule grill that can be positioned in the most difficult of areas. Countless hours were spent to test and select the most suitable active and passive components. This no compromises process ensures the low noise, high dynamic range and unappreciable distortion of the microphone circuitry. The end result give the Dragonfly a complete sonic neutral electronics with a low output impedance and no side effects from cable capacitance and load impedance. This way only the capsule determines the sound. The Dragonfly is packaged in an attractive linen box. Available in a matched set.

- Cardioid condenser with Class A discrete circuitry
- Versatile sound—rich lows, contoured mid-range, silky presence in the highs
- Integrated elastic shockmount and rotating head for optimum placement
- Multi-purpose mic—ideal for pop vocal, electric guitar and drum overheads
- Includes linen storage box
- Optional accessories include the Cranberry Cable

<table>
<thead>
<tr>
<th>Directional Pattern</th>
<th>Bottle w/ B6</th>
<th>Cactus</th>
<th>Kiwi</th>
<th>Mouse</th>
<th>Blueberry</th>
<th>Dragonfly</th>
<th>Baby Bottle</th>
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<tr>
<td>Frequency Range</td>
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<td>20Hz-20kHz</td>
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<td>1.38 lbs.</td>
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*1kHz into 1 kohm
BLU E

BABY BOTTLE

BLUE’s most affordable microphone to date, the Baby Bottle employs the styling, attention to detail, and hand-crafted quality for which BLUE has become famous. Each and every part of this solid-state, class A discrete condenser has been hand selected to insure nothing short of a stellar performance. Enclosed in a Lollipop spherical grille is a precision-machined, gold-sputtered capsule with a fixed cardioid pattern. Ideal for recording vocals, percussion, or any acoustic instruments. Comes nestled inside a velvet pouch protected by a beautiful cherrywood box.

- Cardioid condenser Class A discrete circuitry
- Upfront sound—robust lows, detailed mid-range and an accurate presence
- Multi-purpose mic ideal for classic lead vocals, brass and string instruments
- Hand tuned and tested
- Includes cherrywood storage box, velvet bag and mic clip. Optional accessories include the Baby Pop pop filter, Baby Shock shock mount and Blueberry Mic cable

Microphone Cables
BLUE’s high definition microphone cables gives you noticeable sonically improvement. Champagne is the ultimate tube mic cable with nothing comparably available elsewhere. The audio signal conductors are separately shielded from all the other conductors. With this is achieved additional clarity to your mic signal. The Blueberry, Cranberry and Kiwi accompany the Class A Discrete microphones of the same name. Built to BLUE specifications, as provided below, these mic cables offer the recordist and performer, a signal path of sonic quality and high durability.

Champagne Tube Mic Cable
A perfect blend of the best materials, the Champagne cable will tickle the finest taste buds, as well as warm the coldest critic. The perfect compliment to the ultimate tube microphones, Champagne is the only cable designed to reproduce the quality sound you would expect to hear out of the best tube microphones in the industry.

- A 2 conductor 22 Awg with 60 strands of 40 awg using only the finest of BLUE’s
  virgins proprietary materials available for the microphones transmission line. BLUE
  then twist the pair to totally eliminate noise and covers then with the finest tinned copper braid to insure your listening environment. To guarantee voltage and power, BLUE incorporates 5 more conductors or 24 gauge. When you listen to the bouquet, it could only come from BLUE’s classic Champagne. Supplied with the Bottle and Cactus tube mics.

Blueberry (BB)
A two conductor 22 Awg cable using only BLUE’s virgin proprietary materials. The twisted pair construction eliminates any noise caused by electromagnetic interference emanating from equipment used in the studio or stage environments. Furthermore, the tinned copper 95% braided shield makes this cable a dream to handle in any temperature condition where microphonic pick-up might come into play. When it comes to maximum frequency response, this is definitely a fruit of a different color.

- Hand tuned and tested
- Includes cherrywood storage box, velvet bag and mic clip. Optional accessories include the Baby Pop pop filter, Baby Shock shock mount and Blueberry Mic cable

Cranberry (CB)
A rugged two conductor 20Awg twisted pair mic cable using BLUE’s virgin proprietary materials. This cable is the perfect compliment for any type of radio, TV, or sound reinforcement applications. The twisted pairs reject any electromagnetic interference that may be caused by surrounding equipment. Also, this cable has a 95% tinned copper braided shield. The braided shield is excellent in eliminating microphonic pick-up which will allow a noise free listening environment. Ultra-flexible and ultra quiet, this cable might taste sour, but it will never be sour to your ears.

Kiwi (KB)
The ultimate in quad mic cable design, the Kiwi cable uses BLUE’s hand picked virgin proprietary materials. The quad design gives the cable an advantage when trying to achieve the highest quality recording where exquisite tonal quality is the utmost importance. By using 4-22 Awg twisted pair conductors and a 95% tinned copper braided shield, this will eliminate any matters of electromagnetic interference and microphonic pick-up. When you’re looking for the sweetest in sound, pick a Kiwi!
B3 Broadway Series Lavalier Microphone

The B3 is a very small, round, omnidirectional electret microphone specially equipped to withstand moisture and makeup when placed in the hair or on the body. It will even survive an overnight bath in your favorite cola beverage. Extremely small, the B3 looks great when you want to see it, hides easily when you don’t. Hide it in hair of actors, news anchors and lecturers. Ideal for use in churches, schools and general lavalier applications, the B3 features up to 150dB SPL on 48v phantom power, has field-selectable high-frequency response, and with Kevlar reinforced cable and an ultra-thin diaphragm, sets a new standard for low handling noise. Available in five colors (Black, White, Light Skin, Cocoa, Gray).

- Excellent choice for hair miking in theater work. Features include moisture resistance, small size, and flat frequency response.
- The protective cap on the B3 is easily removed for cleaning or replacement when clogged with makeup.
- Includes tie clip, windscreen, belt clip for connector and two high-frequency response control protective caps.

B6 Incredibly Tiny Lavalier Microphone

Only one tenth of an inch (2.5mm) in diameter, the B6 is smaller than the cable of other lavalier microphones, yet out performs microphones many times its size. The B6 is effectively hidden when it’s in plain sight. For example choose a protective cap near the color of a shirt and poke the B6 out through a button hole. Tape the cable to the back of the shirt to secure it and your done. Say goodbye to the hassle and degraded sound quality you get burying mics under clothing! Hide it in hair or glue on the faces of actors, news anchors and lecturers. It is also designed to survive. Highly resistant to moisture, makeup and other hazards found in a production environment, the B6 will even survive an overnight soak in your favorite cola beverage. The outer screen in the B6’s replaceable cap stops makeup and sweat before it enters the microphone element. If it clogs you can simply remove the cap for cleaning or replacement. The B6 includes a tie clip, windscreen, belt clip for connector and a set of three high frequency protective caps so you can match your application.

Optional Accessories for the B3 and B6:

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Tie Clip</td>
<td>$14.95</td>
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<tr>
<td>Double Tie Clip</td>
<td>$21.95</td>
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<tr>
<td>Magnetic Clip</td>
<td>$16.95</td>
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<td>Viper Clip</td>
<td>$13.75</td>
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<tr>
<td>Windscreen</td>
<td>$7.95</td>
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<tr>
<td>Protective Cap</td>
<td>$9.95</td>
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</table>

www.bhphotovideo.com
Ultra Light Headset Microphone

The E6 EarSet is truly revolutionary combination of beautiful form and outstanding sound. So small, it’s all but invisible. Perfect on stage or in church for clergy, performers, trade show presenters, auctioneers, teachers and lecturers, the Isomax E6 EarSets are the answer when you need the highest quality voice pickup without the bulk and appearance of a conventional headset. Light and springy, Isomax E6 EarSets clip around your ear, not around your head so they never interfere with hairstyles, headphones or hats. Available in Light Beige, Tan, Cocoa and Black colors.

- The industry's smallest, lightest and least visible headworn microphones.
- Clips directly to your ear. No conflict with hairstyles. No adjustment needed for the width of your head. The cable attaches with a quick connect connector for easy service.
- Has the wide 50Hz to 20kHz response of a world class vocal microphone.
- Cardioid and hypercardioid patterns available for tough feedback situations.
- Handles high sound levels (up to 145dB)

- Available for use with most wireless transmitters or hard-wired phantom power with adapter.
- Good rejection of feedback and unwanted noise.
- Resistant to the sweat and moisture on stage.
- High frequency response can be adjusted by changing the provided protective caps.
- Available in four colors (light beige, tan, cocoa and black) and three sensitivities: E60W5 for normal speaking (135dB SPL), E60W6 for general theater (145dB SPL), E60W7 for very loud vocals (155dB SPL).

<table>
<thead>
<tr>
<th>Manufacture</th>
<th>Connector Type</th>
<th>B3 Omni Lav Mic</th>
<th>B6 Omni Lav Mic</th>
<th>E6 Headset Mic</th>
<th>E6 EarSet Cables</th>
</tr>
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<tbody>
<tr>
<td>AKG</td>
<td>Switchcraft TA3F</td>
<td>B3W [FF05] JAK</td>
<td>B6W [FF05] JAK</td>
<td>E60W5 [JAK]</td>
<td>E60CAble [JAK]</td>
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<td></td>
<td>B-LOC (3.5mm)</td>
<td>B3W [FF05] JAG</td>
<td>B6W [FF05] JAG</td>
<td>E60W6 [JAG]</td>
<td>E60CABLE [JAG]</td>
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<tr>
<td>Audio-Technica</td>
<td>Special 3.5mm Plug</td>
<td>B3W [FF05] JAP</td>
<td>B6W [FF05] JAP</td>
<td>E60W6 [JAP]</td>
<td>E60CAble [JAP]</td>
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<td></td>
<td>Switchcraft TA5F</td>
<td>B3W [FF05] JAW</td>
<td>B6W [FF05] JAW</td>
<td>E60W7 [JAW]</td>
<td>E60CABLE [JAW]</td>
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<td>Azden</td>
<td>Hirose 4-pin</td>
<td>B3W [FF05] JZU</td>
<td>B6W [FF05] JZU</td>
<td>E60W7 [JZU]</td>
<td>E60CAble [JZU]</td>
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<td>Non-locking 3.5mm</td>
<td>B3W [FF05] JZP</td>
<td>B6W [FF05] JZP</td>
<td>E60W7 [JZP]</td>
<td>E60CABLE [JZP]</td>
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<tr>
<td>Beyer</td>
<td>Beyer 4-pin</td>
<td>B3W [FF05] JBS</td>
<td>B6W [FF05] JBS</td>
<td>E60W7 [JBS]</td>
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<td>Lectrosonics</td>
<td>Switchcraft BS1</td>
<td>B3W [FF05] JLS</td>
<td>B6W [FF05] JLS</td>
<td>E60W7 [JLS]</td>
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<td>Switchcraft TA5F</td>
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<td>E60W7 [JLS]</td>
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<td>Switchcraft A3M</td>
<td>B3W [FF05] JLS</td>
<td>B6W [FF05] JLS</td>
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<td>Nady</td>
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<td>B3W [FF05] JNL</td>
<td>B6W [FF05] JNL</td>
<td>E60W7 [JNL]</td>
<td>E60CABLE [JNL]</td>
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<td></td>
<td>Switchcraft TA3F</td>
<td>B3W [FF05] JNS</td>
<td>B6W [FF05] JNS</td>
<td>E60W8 [JNS]</td>
<td>E60CABLE [JNS]</td>
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<td>Samson</td>
<td>Hirose 6-pin (gray or black)</td>
<td>B3W [FF05] JSA (X)</td>
<td>B6W [FF05] JSA (X)</td>
<td>E60W8 [JSA (X)]</td>
<td>E60CAble [JSA (X)]</td>
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<td></td>
<td>Switchcraft TA3F</td>
<td>B3W [FF05] JSV</td>
<td>B6W [FF05] JSV</td>
<td>E60W8 [JSV]</td>
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<td>Sennheiser</td>
<td>Microdot</td>
<td>B3W [FF05] JSE</td>
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<td>E60W8 [JSE]</td>
<td>E60CABLE [JSE]</td>
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<td></td>
<td>Lemo 3-pin</td>
<td>B3W [FF05] JS3</td>
<td>B6W [FF05] JS3</td>
<td>E60W8 [JS3]</td>
<td>E60CABLE [JS3]</td>
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<td>Lemo 1-pin</td>
<td>B3W [FF05] JS1</td>
<td>B6W [FF05] JS1</td>
<td>E60W8 [JS1]</td>
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<td>3.5mm locking plug</td>
<td>B3W [FF05] JSD</td>
<td>B6W [FF05] JSD</td>
<td>E60W8 [JSD]</td>
<td>E60CABLE [JSD]</td>
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<td>B3W [FF05] JSL</td>
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<tr>
<td></td>
<td>Lemo 4-pin</td>
<td>B3W [FF05] JSU</td>
<td>B6W [FF05] JSU</td>
<td>E60W8 [JSU]</td>
<td>E60CABLE [JSU]</td>
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<tr>
<td>Sony</td>
<td>Twist-lock type 4-pin</td>
<td>B3W [FF05] JSN</td>
<td>B6W [FF05] JSN</td>
<td>E60W8 [JSN]</td>
<td>E60CABLE [JSN]</td>
</tr>
</tbody>
</table>

If your wireless system is not listed here, give us a call or check our website for additional models (many more are available).

When ordering, please specify desired color and microphone sensitivity.

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MB SERIES

Mini-Boundary Microphone System

With their incredibly small size, Crown's MB Series mics offer a wide range of options and flexibility—making boardroom installations much easier and a lot more affordable. Using a miniature, low-profile design, these mini-boundary, supercardioid microphones virtually disappear when installed, yet provide the same great sound as Crown's highly-acclaimed PCC microphone series while providing substantial savings compared to traditional microphones.

Designed with the help of leading audio consultants and contractors, the MB Series is a comprehensive system of microphones and electronics that's perfect for a wide range of applications. Comprised of five microphones—three that work with the innovative MB-100 and MB-200 interfaces and two that operate in a traditional stand-alone manner—the MB System lets you mix and match microphones as needed for multiple configurations.

Designed to accommodate up to four microphones, the MB interfaces provide four separate inputs, outputs and programmable switching connections. With easy-hookup Phoenix connectors and a low profile, the MB interface mounts quickly and conveniently beneath a tabletop. All MB System microphones feature a surface-mounted supercardioid capsule for extended reach and clarity. Each microphone also features a built-in red LED that illuminates when the microphone is active.

The MB-1, MB-2, MB-3 and MB-4 are each designed for multi-miking applications such as teleconferencing, distance learning, boardrooms, and courtrooms. The MB-3 can also be used for surveillance in security applications, and the MB-4 in TV or theatrical applications.

**FEATURES**

- Removable grille assembly can be painted
- Remote sensing of switch closure (in MB-200)
- A common interface for up to four mics reduces the size and cost of the system
- Electret condenser mic elements deliver clean, clear, natural sound
- Low-Z balanced output prevents hum and high-frequency loss
- On/off switches can be added
- Switches can be internally programmed for touch-on/touch-off, momentary on, or momentary off (not on MB-3)
- Defeatable LED (not on MB-3)
- They operate on 12-48v DC phantom power
- Three year warranty

**MB SYSTEM ELECTRONICS INTERFACE**

The MB-100 and MB-200 are electronic interfaces that power up to four Crown mini-boundary MB-1, MB-2, or MB-4/E microphones. Interfacing up to four mics reduces the size and cost of the mic system and reduces installation time.

The MB-100 provides programmable switching to turn the mic on or off if desired (switches not provided). The MB-200 is the same plus it also has remote switch sensing via an optical coupler.

Two microphones can be wired to each pluggable terminal block, which plugs into the MB-100 or MB-200. Pluggable terminal blocks are also provided for the balanced outputs on the interface, and for remote switch sensing. They are powered by 18 to 48v phantom power from a mixer or a phantom power supply.

- Powers and equalizes up to four mics
- Provides balanced outputs from the interface
- Common interface for up to four microphones reduces the size and cost of the system
- Pluggable microphone inputs

| MB-100 .................................................. | 229.95 |
| MB-200 .................................................... | 307.95 |
A low-profile circular microphone just 1.3” wide, the MB-1 features a bottom-mounted 1/4” stereo phone plug for quick insertion and removal from the supplied table insert.

A table insert with a phone jack that accepts the mic is included. Featuring a black anodized aluminum finish, the insert flush-mounts in a hole drilled in the table. It can be permanently installed, and includes a black dust cap for use after meetings when the mic is removed.

Thanks to its supercardioid pickup pattern, the MB-1 greatly reduces ambient noise and pickup of room reverberation. The result is a clearer sound.

In combination with an MB-100 or MB-200 interface, the MB-1 can be programmed for multiple switching functions.

Available in black anodized (MB-1), solid brass (MB-1BR) and paintable aluminum (MB-1AL) finishes.

The tiny MB-2 (less than 1x1½”) is a removable low-profile rectangular microphone featuring a 1/4” stereo phone plug for quick insertion and removal from a standard contractor-supplied jack (Switchcraft 152B Thick Panel Phone Jack or equivalent). A locating pin (removable) prevents the microphone from being rotated.

Thanks to its supercardioid pickup pattern, the MB-2 greatly reduces ambient noise and pickup of room reverberation. The MB-2 features multiple switching modes when used with an MB Interface.

A stand-alone unit with a built-in electronics package, the low-profile MB-3 mounts easily into tabletops, lecterns, walls or ceilings for permanent installation.

On the bottom of the mic is a tubular power module with a 3-pin XLR-type output connector. It is powered by 12-48v DC phantom power, and is low-impedance balanced. The cable may be positioned to exit either the bottom or rear of the microphone.

Double-sided sticky tape is provided for attaching the unit under shelves, on walls, etc.

Thanks to its supercardioid pickup pattern, the MB-3 greatly reduces ambient noise and pickup of room reverberation. The result is a clearer, more intelligible sound.

The MB-4 is a mini rectangular microphone designed for stand-alone use. A power module with an attached 15’ XLR cable has all the required mic electronics built-in. The mic is powered by 12-48v DC phantom power, and is low-impedance balanced. The cable may be positioned to exit either the bottom or rear of the microphone.

Double-sided sticky tape is provided for attaching the unit under shelves, on walls, etc.

Thanks to its supercardioid pickup pattern, the MB-4 greatly reduces ambient noise and pickup of room reverberation. The result is a clearer sound.

The MB-4 is also available in a pigtail version. The MB-4E is the same, but without the electronics connector. Its cable fits through a small hole in the mounting surface and is intended for use with the MB Interfaces. (Must be used with the MB-100 or MB-200).

MB SERIES SPECIFICATIONS

<table>
<thead>
<tr>
<th>Freq. Resp.: 50 Hz to 15 kHz</th>
<th>Impedance: 150 ohms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity: 22 mV/Pa</td>
<td>Polar Pattern: Half-Supercardioid</td>
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</tbody>
</table>

MB SERIES PRICING

| MB-1 Black finish........... | 113.95 |
| MB-1AL Aluminum finish..... | 113.95 |
| MB-2BR Brass finish........ | 113.95 |
| MB-2........................ | 98.95  |
| MB-3........................ | 152.50 |
| MB-4........................ | 118.50 |
| MB-4E without an electronics connector | 101.95 |

...for Boardrooms, Teleconferencing, Distance Learning, Theater and Surveillance
CROWN

PCC Series

Phase Coherent Cardioid Microphones for
Stage Floor, Altar Tables, Boardrooms and Teleconferencing

Crown's PCC (Phase Coherent Cardioid) Series microphones offer exceptional acoustic performance in handsome, low-profile enclosures. Designed for high-end theatrical work, the PCC Series has become the standard for stage miking applications. These mics also provide an elegant solution for discrete multi-mic applications, such as lecterns and boardroom tables as well as altar, teleconferencing and distance-learning applications.

Each mic employs Crown's Phase Coherent Cardioid boundary mic technology to provide impressive gain before feedback and directional pickup without sacrificing tonal quality. This results in microphones with a wide, smooth frequency response, free of phase interference from surface sound reflections.

Designed to withstand the rigors of the stage, each microphone has been finely crafted using the very best materials while maintaining affordability. Their low profile enables them to be placed inconspicuously on the stage floor, on a lectern, or any other appropriate surface.

Flexibility is further enhanced by a membrane switch control option for boardroom and podium applications. This unique, silent operating switch can be configured three ways: touch on/off, momentary on, or momentary off operation.

- They are surface-mounted miniature cardioid microphone of professional quality. Handsomely styled, they are appropriate for use on the most elegant boardroom table or lectern. Other applications include churches, courtrooms and teleconferencing.
- The microphones use the principle of phase coherency achieved by mounting a small-diameter mic capsule very near a surface or boundary. Direct and reflected sound waves arrive at the mic in-phase. This increases sensitivity 6 dB and ensures phase coherency up to the highest frequencies in the audible spectrum, resulting in a wide, smooth frequency response free of phase interference. Clarity and reach are also enhanced.
- Electret-condenser capsules provides a wide, smooth frequency response from 50 Hz to 20 kHz. RFI suppression is included. Self-noise is low and sensitivity is very high.
- Capable of withstanding up to 120 dB SPL without distortion, they will never overload in practical use.
- All include three-position (Flat, Cut and Boost) bass-tilt switch on the bottom of the microphones allows you to tailor the low-end frequency response for particular applications. On the bottom of the microphones is a three-position switch allowing you to adjust low-frequency response:
  - The FLAT position provides a flat low-frequency response, for normal usage. They are shipped from the factory in flat position.
  - The CUT position rolls off the bass, useful in noisy or boomy surroundings.
  - The BOOST position boosts the bass for a more natural sound when the mic is used on a small surface such as a lectern.
- Self-contained electronics eliminate the need for an in-line preamp. Powered by 12-48v DC phantom power, they have a low-impedance balanced output which permits long cable runs without hum pickup or high-frequency loss.
- They use a Switchcraft TB3M mini-XLR as their standard connection. In addition, all except the PCC-160 can be ordered with a ¼˝ stereo phone plug on the bottom of the base plate (they have the suffix “SPP” added to the model number).
- All mics (except SPP versions) include a black 15´ cable with Switchcraft TA3F (mic end) and an XLR-M connector (output).
- Because of their highly directional pickup pattern, they minimize background noise and feedback.
- All except the PCC-160 (all steel construction) are made of high-impact molded plastics and steel mesh grille.
- They each include a three-year warranty.
- All mics are available in an off-white version to blend with church altars or any situation where a lighter color is called for.

All except the PCC-160 are available with a ¼˝ stereo phone plug on the bottom of the base plate instead of a cable. They have the suffix “SPP” added to the model number. For example, PCC-130SPP or PCC-170SW/SPP.
**PCC-130/130W Mighty Mini Boundary**

Sometimes, unobtrusive just isn’t enough. Enter the PCC-130, featuring exceptional performance with the appearance of the PCC-170 in a package only about half the size. When the situation simply demands that a mic be heard but not seen, the PCC-130 with its small size, gives you an obvious choice. Its cardioid pattern reduces background noise, reverb, and feedback.

- **PCC-130** Black color .......................................................... **211.95**
- **PCC-130W** White color ....................................................... **211.95**
- **PCC-130SPP** Base-mounted, 1/4” stereo phone plug version. Black color .......................................................... **211.95**
- **PCC-130W SPP** Base-mounted, 1/4” stereo phone plug version. White color ....................................................... **211.95**

**PCC-130SW Mighty Mini Boundary**

Same as the PCC-130, the PCC-130SW also offers a membrane switch control option. This makes it ideal for multiple-microphone use on a conference table where each person wants control of his or her microphone. A bottom-mounted slide switch configures the silent-operating membrane switch for touch on/off, momentary on or momentary off. A high-intensity LED lights when the unit is on. In the off position, the mic is attenuated 70 dB.

- **PCC-130SW** ............................................................................. **233.50**
- **PCC-130SW/SPP** 1/4” (6.35-mm) stereo phone-plug version ................................................. **233.50**

---

**PCC-160/160W Industry-Standard Boundary Mic**

Long recognized as an industry-standard stage-floor microphone, the supercardioid PCC-160 is also great for lecterns, conference tables and news desks—anywhere maximum gain and articulation are essential. Thanks to its low profile and black finish, the microphone becomes almost invisible in use. A side-mounted connector complements the form factor of the PCC-160, allowing the unit to be placed effectively at the stage edge, at the top of a lectern or in other tight spots. If desired, the cable can be hard-wired for bottom entry. The heavy-gauge, all steel body protects the unit from abuse. Available in off-white finish (PCC-160W) for blending with church altars and other surroundings where a lighter color is appropriate.

- **PCC-160** ................................................................................... **249.95**
- **PCC-160W** white color .......................................................... **249.95**

---

**PCC-170/170W The Elegant Boundary**

A larger, more elegant version of the PCC-130, the PCC-170 features a frequency response carefully tailored to create extremely natural voice reproduction. Equally adept in the boardroom, at the lectern, or for teleconferencing. Available in off-white finish (PCC-170W) for blending with church altars and other surroundings where a lighter color is appropriate.

- **PCC-170** Black ........................................................................ **224.95**
- **PCC-170W** White ................................................................... **224.95**
- **PCC-170SPP** base-mounted, 1/4” stereo phone plug version .............................................. **254.95**

**PCC-170SW The Elegant Boundary**

Same as the PCC-170, the PCC-170SW also offers a membrane switch control option. This makes it ideal for multiple-microphone use on a conference table where each person wants control of his or her microphone. A bottom-mounted DIP switch configures the membrane switch for touch on/off, momentary on or momentary off. A high-intensity LED lights when the unit is on. In the off position, the mic is attenuated 70 dB.

- **PCC-170SW** ............................................................................. **286.50**
- **PCC-170SW/SPP** 1/4” (6.35-mm) stereo phone-plug version ................................................. **286.50**

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1-800-875-6951 • www.bhphotovideo.com
LM-300A/300AL
Supercardioid Condenser Dual Gooseneck Lectern Microphones

No matter the situation, the elegant LM-300A, LM-300AL and LM-301A can meet the need. Dual-gooseneck microphones for lecterns, pulpits, or similar applications, each is a professional-quality, electret-condenser mic with superb supercardioid performance and noise rejection. Explosive breath sounds are effectively reduced with the supplied foam 2-stage pop filter, while a flat/low-cut switch further reduces breath pops.

The LM-300A (17.25˝) and the 22˝ LM-300AL (extended) plug directly to an XLR female panel connector. The microphone screws onto a standard 5/8˝-27 thread.

LM-300A ........................................ 219.95
LM-300AL ................................. 229.95

LM-301A
Supercardioid Condenser, Miniature Dual Gooseneck Microphone

The LM-301A is designed for professional use on lecterns as well as inconspicuous miking of musical instruments. The LM-301A comes in two parts: microphone cable and a cylindrical electronics housing. The microphone has a built-in 5/8˝-27 threaded collar that can be screwed onto a mic stand, mic boom or an Atlas AD-12 male flange. Because of the unique design of the mounting collar, the mic cable can be routed either outside or inside the mounting collar. Includes the LM-301SM shock mount adapter for use with the LM-3M shock mount .... 279.95
GLM-100/GLM-200
Miniature Omni and Hypercardioid Condenser Mics

The GLM ("Great Little Mic") series are miniature omnidirectional (GLM-100) and hypercardioid (GLM-200) condenser microphones designed for vocals and musical instruments in professional recording, broadcast and sound reinforcement applications. They offer all the quality of large studio microphones, yet are nearly invisible in use. Built to the exacting standards of the film and broadcast industry, they incorporate miniature electronics in a rugged housing that resists damage from demanding professional use and provides lasting performance under the most rigorous of conditions.

◆ Their output is balanced, low impedance, which allows long cable runs without high-frequency loss
◆ The frequency response of large microphone capsules is often degraded by the microphone housing (due to sound diffraction). In contrast, their housing is designed to actually improve the high-frequency re-response of the microphone capsule
◆ Used as a lavaliere microphone, suspended over a choir or orchestra, or hidden on a film set, the GLM-100/200 disappear in use yet provides excellent sound quality
◆ The GLM-100/200 can be clipped or taped onto an acoustic guitar, sax or flute to allow the performer freedom of movement. They can also be attached to drum rims to pick up a drum set without the unsightly clutter of boom stands
◆ Permanently attached 8’ XLR cable
◆ Frequency response is wide and smooth, with emphasized high frequencies for presence and brilliance
◆ They accept 12-48v phantom power supply
◆ Excellent transient response, minimal off-axis coloration and high overload levels (GLM-100/150 dB SPL, GLM-200/131 dB SPL)
◆ The GLM-100E version of the mic comes without electronics for use with a wireless transmitter
◆ GLM-100 includes the GLM-TB Tie Bar, GLM-BC Belt Clip and WS-2 windscreen
◆ GLM-200 includes the GLM-UM Universal Mount, GLM-TB Tie Bar, and GLM-BC Belt Clip and WS-2 windscreen

Optional Accessories
GLM-SM Surface Mount
Mounts a GLM to a surface, PZM -style
GLM-DM Drum Mount
Provides permanent mounting on drums
GLM-HM Horn Mount
Includes a large, soft clip to prevent marring
GLM-CH Choir Hanger
For overhead miking
GLM-OHM Overhead Mount
Boom stand mount for overhead miking of drum sets. Screws onto a standard mic stand with 5/8”-27 thread
GLM-CM Cymbal Mount
Includes clamp, rod/elbow assembly and vertical rod

LM and GLM SERIES SPECIFICATIONS

<table>
<thead>
<tr>
<th>Element</th>
<th>LM-201</th>
<th>LM-300A</th>
<th>GLM-100</th>
<th>GLM-200</th>
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</table>
CROWN

PZM Series

Crown’s PZM (Pressure Zone Microphones) are serious tools for the sound reinforcement and recording professional, as well as cost-effective solutions for a variety of other applications. The first licensed manufacturer of the Pressure Recording Process (the foundation of PZM technology), Crown offers the most successful line of PZM microphones available today. With the PZM advantages of a 6 dB increase in sensitivity and S/N ratio, Crown’s PZM series provide you with the ability to optimally place microphones in the performance venue. Designed for use on flat surfaces, PZM’s can be placed where conventional mics do not work well. Small size and low profile also make them an excellent choice for recording projects, conference rooms and security applications. Their wide, smooth frequency response makes them ideal for miking pianos, harps and other orchestral instruments. In fact, top recording engineers all over the world are using Crown’s professional PZM mics to improve the quality of their recordings.

Sound Grabber II

The Sound Grabber II is an affordable PZM mic designed to meet the needs of the home or business recordist and bring them the benefits of PZM technology. Ideal for conferences, group discussions, interviews, home video production, lectures, and recordings, the Sound Grabber II can be placed on a large surface such as a table, floor, wall, or lectern.

- Offers the opportunity for vast improvement in the quality of recordings
- Picks up sounds at distances you never thought possible with a clarity that other mics, because of the limitations of their construction, cannot match
- Sound Grabber II does not need to follow the action, since it has a wide-angle pickup pattern. So long as the mic “sees” the sound, in whatever direction or angle, it will pick it up clearly; it does not need to be between you and the other person
- Speakers or vocalists can move freely around the Sound Grabber II without their tone quality changing

PZM-185 General Purpose Mic

An affordable, all-around performer, the PZM-185 is ideal for applications such as conferences, group discussions, interviews, broadcast, home video production, lectures, and recordings. The mic can be placed on a large surface such as a table, floor, wall, or lectern.

- Powered either by an internal AAA 1.5V battery or 12-48v phantom power
- Low-profile reduces “mic fright” and minimizes clutter. Nearly invisible on camera
- Hemispherical polar pattern allows clear pickup of everyone surrounding the mic
- The PZM-185 minimizes pick up of vibration and handling noise. Its electret condenser capsule provides a wide, smooth frequency response from 50 Hz to 16 kHz
- The mic is protected against static and RFI. Output is XLR-balanced, low impedance, which allows long cable runs without hum pickup or high-frequency loss

Pressure Zone Microphone Technology

PZM mics use Pressure Zone Microphone technology in which sound waves reinforce themselves in the area nearest a flat surface, usually referred to as the boundary. Crown’s PZM mics use a miniature mic capsule mounted very near a sound-reflecting plate or boundary in the Pressure Zone. In this zone, direct sound from the sound source combines in phase at all frequencies with reflected sound off the boundary. The benefits are many: 6 dB more sensitivity, 6 dB less noise, a wide, smooth frequency response free of phase interference, excellent clarity and “reach,” and consistent pickup anywhere around the microphone.

Equipment Leasing Available
PZM-20R Special Purpose Pro

Perfect for permanent flush-mounting to conference tables, lecterns, pulpits, walls, you name it. A hemispherical pickup pattern, rising high-frequency response and low-frequency roll-off makes the PZM-20R a great choice for clear speech pickup. It also mounts in shallow cavities or a standard “double gang” electrical wall box and can be powered directly from phantom power via screw terminals. A white version also available.

- Designed for permanent flush-mounting in tables, lecterns, pulpits, and judicial benches
- Unobtrusive appearance and hemispherical pickup pattern makes it ideal for conference table use.
- Three small guard-posts prevent papers from sliding underneath the cantilever arm and altering the frequency response.

PZM-20R (Black) ................................................................. 279.95
PZM-20RW (White) ............................................................. 279.95

PZM-30D Switchable Performance

Added acoustical gain. Clean, clear high frequencies. Uniform polar response. The PZM-30D offers all of these in addition to the PZM advantages in a rugged, durable package. A switchable dual-frequency response provides a “rising” position that adds brilliance and articulation, while the “flat” position maintains a smooth, flat and natural high-frequency response. Miniaturized electronics allow direct 12-48v phantom powering without external interface.

- Switchable dual frequency response: rising (R) or flat (F). The “rising” position adds brilliance. This makes it useful wherever a crisp attack is desired, such as on percussion, drums, or piano. You can get a bright sound without boosting high frequencies on the recording console; the result is lower noise. The “flat” position provides a smooth, flat, high-frequency response for natural sound reproduction.
- It fits into a 4.59” square hole or in a standard 4 x 4” electrical outlet box. No external power-supply interface is required as electronics in the base of the PZM-20R adapt it for 12-48v phantom powering.
- The wide-range frequency response of the PZM-20R is emphasized at high frequencies for clarity and articulation. Low frequencies below the voice range are filtered out to reduce rumble.

PZM-30D ............................................................................. $291.95

PZM-6D Indisputably Inconspicuous

With 100 percent of the performance but only one-quarter the footprint of the PZM-30D, the PZM-6D is the smallest high-performance PZM available. Designed for professional recording, sound reinforcement, teleconferencing and broadcasting, the PZM-6D is ideal for miking grand pianos, mounting overhead or for placement on conference tables. Like the PZM-30 it offers switchable dual-frequency “rising” or “flat” response.

- Unobtrusive appearance is great for conference rooms, as well as on TV/film and video productions
- Suspended over an orchestra on a clear panel, the PZM-6D practically disappears. Miniature, permanently attached cable also reduces visual clutter
- Capable of withstanding up to 150 dB SPL without distortion. Self noise is low, and sensitivity is high enough to override mixer noise in distant-miking applications

PZM-6D ............................................................................. $279.95
PZM Series

PZM-10/10LL Security and Surveillance

Designed for security, surveillance, and conference table use, the PZM-10 is a low-profile omni-pressure zone mic that doesn't look like a microphone, so it is inconspicuous. Featuring a cylindrical design for ceiling, wall or tabletop installations, it is practically invisible. The mic's tubular housing mounts in a 25/32” diameter hole in a ceiling panel, wall or table.

- In the PZM-10, low frequencies below the voice range are rolled off to reduce pickup of air-conditioning rumble. The high-frequency response is boosted slightly to help articulation.
- Because of its tailored response and PZM construction, the PZM-10 will pick up conversations or other desired sounds with extra clarity and definition.
- Unique mounting system allows quick installation
- Output is XLR-balanced, low impedance, which allows long cable runs without hum pickup or high-frequency loss. Powering is by 12 to 48 V phantom power
- The mic's humbucking transformer and steel case prevent hum pickup, even near fluorescent lights

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
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<tbody>
<tr>
<td>PZM-10</td>
<td>The same as the PZM-10 with a line-level output from its balanced but unterminated cable.</td>
<td>99.95</td>
</tr>
<tr>
<td>PZM-10LL</td>
<td>The same as the PZM-10 with a line-level output and is powered by 24V DC or 24V AC.</td>
<td>139.95</td>
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</table>

PZM-11 Security and Surveillance Mic

The PZM-11 presents a low-cost solution for security and surveillance applications. Mounted on a standard wall plate, the PZM-11 doesn't look like a microphone but rather an ordinary light switch. Intelligibility is excellent, with low frequencies below the voice range rolled off to reduce the pickup of HVAC rumble. Electronics on the rear of the plate offer screw terminals, eliminating the need for connectors. The PZM-11 uses 12-48 volts phantom power, while the PZM-11LL features line-level output and is powerable by 12-24V DC or 24V AC.

- Ideal for security, surveillance, and conference-room applications, the PZM-11 can be mounted in the ceiling or wall in a standard electrical outlet box. Providing excellent intelligibility, the PZM-11 is designed to look like something other than a microphone so as not to draw attention.
- In the PZM-11, low frequencies below the voice range are rolled off to reduce pickup of air-conditioning rumble. The high-frequency response is boosted slightly to aid clarity and articulation.
- The microphone connector is a row of screw terminals for easy installation. The output is balanced, low impedance, which allows long cable runs without hum pickup or high-frequency loss. Powering is via 12 to 48 volts phantom power.
- The PZM-11LL looks and sounds like the PZM-11, but has a line-level output and is powered by 24V DC or phantom power. And since it has a high output, the PZM-11LL can be plugged directly into a VCR line input, no costly mic preamp required.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>PZM-11</td>
<td>Same as the PZM-11, with a line-level output and is powered by 24V DC or phantom power. The PZM-11LL can be installed without a box because its electronics are shielded inside a removable metal housing.</td>
<td>83.95</td>
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<table>
<thead>
<tr>
<th>PZM Series Specifications</th>
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<tbody>
<tr>
<td><strong>Element</strong></td>
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<tr>
<td><strong>Polar Pattern</strong></td>
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<tr>
<td><strong>Frequency Response</strong></td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
</tr>
</tbody>
</table>

* Omnidirectional at lower frequencies; Unidirectional at higher frequencies
PZM-11LWR  Security & Surveillance

Similar to the PZM-11LL, the PZM-11LWR is a weather-resistant PZM microphone with a balanced line-level output designed for outdoor use. A plastic membrane inside the microphone protects the mic capsule from water damage. The mic mounts in a standard electrical outlet box. Applications include fast-food restaurants, outdoor intercoms, toll booths, bridges, theme park security and home automation.

- Can be plugged directly into a VCR line input — no costly mic preamp is needed
- Output (via screw terminals) can be balanced or unbalanced.
- Powering is by 12-24V AC or DC
- Frequencies below the voice range are rolled off to reduce traffic rumble. The high-frequency response is boosted to help articulation. Tailored response and PZM construction picks up conversations or other desired sounds with extra clarity
- Mic is “weather resistant,” which means:
  - Works during and after rainfall
  - Frequency response changes temporarily if the membrane gets wet or if water freezes on the membrane. Frequency response returns to normal when the membrane dries
  - High-pressure water sprayed directly on the membrane (through the louvered wall plate) may damage the membrane

SASS-P Mk II  Natural Stereo Imaging

The SASS-P Mk II is a patented stereo condenser microphone using PZM technology. A mono-compatible, near-coincident array design makes it perfect for professional recording, broadcast and sampling. It uses two premium-quality PZM mics mounted on boundaries to make each directional. The carefully controlled polar patterns and human-head-sized spacing between the capsules create well-focused natural stereo imaging without a “hole in the middle.” Reproduction is precise and realistic, with the SASS-P Mk II accurately conveying ambient environment for location recording, film sound or synced audio ambience. Separate left and right outputs are balanced. A low-frequency cut switch attenuates frequencies below 100 Hz by 12 dB-per-octave, reducing wind noise and low-end rumble. Powered by two 9-volt batteries or phantom power.

- Provides a very warm smooth sound with more high-frequency brilliance (“air”) and less midrange “hardness.”
- Reproduction of the sound field is precise and realistic. The SASS MkII accurately conveys the ambient environment for location recording film-wide sound, or synced audio ambience (movement of traffic) where movement heard must precisely match movements in the screen image
- A foam barrier/baffle between the capsules shapes the pickup angle of each capsule in the front, and limits overlap of the two sides at higher frequencies. Although the mic capsules are spaced a few centimeters apart, there is little phase cancellation when both channels are combined to mono because of the shadowing effect of the baffle.
- Powered in the field by two 9-volt batteries or 12-48V phantom power. Separate left and right outputs are low-impedance balanced
- Professional applications include:
  - Classical music recording (ensembles)
  - Stereo electronic news gathering (ENG)
  - Sports ambience and crowd reaction
  - Televised theatre and dance
  - Film ambience
  - Stereo sampling for keyboards
  - Stereo sound effects

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1-800-875-6951 • www.bhphotovideo.com
Crown's CM Series of condenser mics offer exceptional quality at truly affordable prices. With application specific microphones, ranging from professional-grade headworn microphones to critical response microphones for the most demanding applications, the CM series can fit almost any miking requirement. With innovations such as Crown’s patented Differoid technology, these microphones combine years of technical know-how with durable, high-quality materials and workmanship.

CM-150 Recording/Acoustical Measurement Microphone

The CM-150 is a 1/2”-diameter omni-directional electret-condenser microphone designed for professional recording applications. It is also ideal for accurate acoustical measurement (free-field measurement and sound-level measurement) applications. The CM-150 is extremely stable over a wide range of environmental conditions and features a flat, wide-range frequency response. It includes a calibrated frequency response curve, WS-15 foam windscreen, ASA-4 stand clamp and a male XLR output.

- Pre-aged titanium diaphragm makes the CM-150 extremely stable over a wide range of environmental conditions.
- Very flat, wide-range frequency response.
- Powered by 18-48v DC phantom power.
- Supplied with a proof-of-performance sheet, which shows frequency response and sensitivity. This information can be used to calibrate the microphone.

- Mic capsule grille fits into a Bruel & Kjaer 4220 pistonphone or similar mic calibrator.
- When used for recording, the CM-150 sounds natural and accurate. It preserves the delicate timbre of acoustic instruments, yet can reproduce all the power of a pipe organ.
- Can handle very loud sounds (127 dB SPL) without distortion. It is protected against static and RFI.
- The off-axis response is also smooth, so any leakage picked up has little coloration. Self-noise is low, permitting clean recordings — especially with close miking.
- Output is balanced, low impedance, which allows long cable runs without hum pickup or high-frequency loss.
- Supplied foam windscreen reduces wind noise outdoors.

CM-200A/CM-200ASW Vocal and Instrumental Mics

The CM-200A is a cardioid condenser microphone that delivers studio-quality sound in a rugged package able to withstand the toughest field conditions. Its smooth, articulate performance combined with a wide frequency response make it an excellent choice for professional applications. Its outstanding performance is complemented with handsome styling and a comfortable balance. The CM-200ASW is the same plus it adds an on/off switch.

- They offer studio quality sound, yet are rugged enough to withstand harsh professional use in the field.
- Sound is smooth and non-harsh – yet very articulate – with a wider frequency range than standard vocal microphones.
- Used up-close, their proximity effect boosts the low-frequency response for a warm, robust sound.
- Upper-midrange “presence peak” adds intelligibility.
- Cardioid pattern increases gain-before-feedback and ejects unwanted background noise.
- Built to withstand extremely loud sound pressure levels without distortion as well as repeated drops and abuse.
- They accept 12-48v DC phantom power.
- Multi-stage pop filter effectively suppresses explosive breath sounds. Handling noise is extremely low.
- Balanced, low impedance output allows long cable runs without hum pickup or high-frequency loss.
- They include carrying case, adjustable mic stand adapter and a foam windscreen to further reduce breath popping and wind noise.

Crown’s CM Series of condenser mics offer exceptional quality at truly affordable prices. With application specific microphones, ranging from professional-grade headworn microphones to critical response microphones for the most demanding applications, the CM series can fit almost any miking requirement. With innovations such as Crown’s patented Differoid technology, these microphones combine years of technical know-how with durable, high-quality materials and workmanship.
CM-310A/CM-310ASW Noise-Cancelling Condenser Mics

A hand-held noise-cancelling microphone for singers, sporting events or other applications with high ambient sound level, the CM-310A features Crown’s patented Differoid technology to provide sizzling performance combined with the best gain before feedback in the industry. Used by top touring professionals worldwide, the CM-310A is ideal for high SPL sound reinforcement applications. And while it offers studio-quality sound, it is still rugged enough to withstand hard use on the road. The CM-310ASW adds switches for on/off operation and rising/flat high-frequency response.

- Differoid technology is differential or noise cancelling, so it rejects sounds that are not close to the microphone. It also discriminates against distant sound sources such as monitor speakers or instruments. An announcer can sit in the stands with the audience, with the P.A. loudspeakers playing loudly and not experience feedback.
- Cardioid pattern rejects sound from the rear, giving them exceptional gain before feedback.
- They accept 12-48v DC phantom power.
- Flat (sounds warm and smooth) or rising (sounds clear and crisp) frequency response can be selected via DIP switch inside the mic handle. Flat position has slightly more gain before feed-back. Announcers may prefer the rising position for its extra intelligibility.
- Built-in pop filter suppresses explosive breath sounds. Handling noise is very low.
- Balanced, low impedance output allows long cable runs.
- Outstanding performance is complemented with handsome styling and a comfortable balance in the hand.
- They include pouch case, mic stand adapter, and foam windscreen for outdoor use.

CM-700/CM-700MP Cardioid Condenser Mics

The CM-700 is a condenser microphone intended for use in professional recording and sound reinforcement applications. With a cardioid pickup pattern and extremely low self-noise, this mic is perfect for clean, noise-free recordings of acoustic instruments, drum overheads and studio vocals. Able to handle up to 151 dB SPL, it features a smooth, wide frequency response and a three-position bass roll-off switch.

- Rugged enough for the road, the CM-700 is well suited for acoustic instruments, drum overheads and studio vocals. It works equally well for popular music (multi-miking) or classical music (stereo and spot miking). Small and inconspicuous, it is a good choice for miking a lectern.
- Very smooth, wide-range frequency response gives it a natural sound. It preserves the delicate timbre of acoustic instruments, yet it can reproduce all the power of a pipe organ.
- Cardioid pickup is uniform with frequency and reduces background noise, room reverberation and feedback. Self-noise is also very low, allowing clean, noise-free recordings.
- Handles extremely loud sounds without distortion (151 dB maximum SPL) and is protected against static and RFI.
- To achieve pristine sound quality, the CM-700 incorporates an ultralight diaphragm, humbucking transformer, polycarbonate capacitors and a gold-plated 3-pin XLR connector.
- Output is balanced, low impedance, which allows long cable runs without hum pickup or high-frequency loss.
- Supplied 2-stage foam pop filter softens breath pops and a foam windscreen reduces wind noise outdoors.
- Accepts 12-48v DC phantom power.
- Three positions bass-tilt switch (flat, low-cut and rolloff).

ALSO AVAILABLE IN STEREO MATCHED PAIRS AS THE CM700MP

The CM-700MP is a matched pair of CM-700 cardioid condenser microphones. They are matched in sensitivity and frequency response within 1.5 dB. A pair of the CM-700’s are an excellent choice for stereo recording of a classical music ensemble, folk group, drum set, piano, vocals, percussion and so on. Includes carrying pouch, ASA-4 swivel mount, foam pop filter and foam windscreen.
CROWN
CM SERIES

CM311A Differoid Headworn Cardioid Condenser Microphone
Offering Differoid technology in a comfortable but rugged headworn package, the CM-311A sounds like the best handheld mic—even with the loudest singers. Designed for demanding touring and live sound applications, cardioid pattern rejects sounds from the rear, such as floor monitors while noise-canceling ability rejects sounds at a distance, such as instruments on stage and crowd noise. The result is full, clear, distortion-free sound with exceptional isolation and gain before feedback—the ideal choice for hands-free work directly in front of loudspeakers. Also available in a version that mounts on Sony MDR-7506 headphones (CM-311AHS) making it ideal for broadcast applications, and with a pigtail output (CM-311AE) for connection to the wireless transmitter of your choice. (CM-311A and CM-311AHS have a 3-pin XLR output).

- The headband and mic boom are adjustable to any vocalist, and because of the boom’s unique behind-the-ear design, it does not cover up the singer’s face.
- Supplied with a pop filter to greatly reduce breath noise and pops, and a 9v battery/phantom-powered beltpack
- The beltpack has an on/off switch, a programmable mute switch for hardwired use, and a “Mic On” LED

CM-311A .......................................................... 259.95
CM-311AHS mounts on a Sony MDR-7506 headset ........................................... 244.95
CM-311AE connects directly to any wireless transmitter .................. 192.95

CM312A Headworn Hypercardioid Condenser Microphone
The CM-312A is a headworn mic with the fit and comfort of the CM-311A—but without Differoid technology. However, its hypercardioid pattern reduces feedback and aids isolation, making it ideal for live sound, aerobics and broadcast situations where a little less discrimination against high stage levels is required. (For more difficult situations though, the CM-311A is recommended). Sound can be tailored by moving the mic closer or farther from the corner of the mouth. And with the mic to the side of the mouth, breath pops are eliminated. Two other versions are available: The CM-312AHS mounts on a Sony MDR-7506 headphone making it ideal for broadcast applications. The CM-312AE offers pigtail output for connecting to the wireless transmitter of your choice (the CM-312A and CM-312AHS have a 3-pin XLR output).

- Smooth, wide-range response makes them ideal for natural reinforcement or recording of the singing voice, organ or other musical instruments
- Ultra-tight supercardioid pattern provides impressive gain-before-feedback while rejecting unwanted noise and reverb
- Extreme low frequencies are filtered out to reduce pickup of room rumble and are protected against static and radio frequency interference

CM-312 .......................................................... Call
CM-312AHS mounts on a Sony MDR-7506 headset ........................................... 177.95
CM-312AE connects directly to any wireless transmitter .................. 244.95

CM-30/CM-31 Miniature Supercardioid Condenser Mics
Professional-quality, supercardioid condenser microphones, the CM-30 is designed for inconspicuous miking of a choir, orchestra or stage. Virtually invisible and with a built-in (removable) hanger for easy positioning, it is the mic of choice for church choir and overhead stage miking. It can also hang over conference tables or discussion groups for inconspicuous isolated miking. Accepts 12-48v phantom power and includes 30’ mic cable which connects to the electronics/faceplate which fits a standard electrical outlet box.

Matching the CM-30’s tiny size, outstanding performance and ease of use, the CM-31 is attached via a 30’ cable to an in-line power supply with a low-frequency cut switch and XLR output.

- The beltpack has an on/off switch, a programmable mute switch for hardwired use, and a “Mic On” LED

CM-30 Black ............... 182.50
CM-30W White ............. 184.95
CM-31 Black ............... 182.50
CM-31W White ............. 182.50
### CM Series Specifications

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<th>CM 150</th>
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<th>CM 310A</th>
<th>CM 310ASW</th>
<th>CM 700/MP</th>
<th>CM 311A</th>
<th>CM 312A</th>
<th>CM 30</th>
<th>CM 31</th>
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<td>4 oz.</td>
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</tbody>
</table>

*1 pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

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### Crown Microphone Accessories

**PH-1A Single Channel Battery Supply**
A single-channel phantom power supply that operates from two standard 9V batteries or PS-24 AC/DC adapter. (Battery power provides 17V phantom and AC power provides 24V phantom.)

The PH-1A powers all condenser mics that operate with phantom power of 18 to 24 V. It includes sufficient hum filtering for extremely quiet operation and is transformer isolated. If AC power fails, the batteries automatically take over. The rugged steel and aluminum chassis is designed to withstand daily abuse in professional applications..................93.95

**PS-24 AC Adapter**
A plug-in AC/DC adapter for the PH-1A. It will also provide power for the LM-200A and LM-201 microphones..................29.50

**PH-4B Phantom Power Supply**
The PH-4B is an AC powered 4-channel power supply providing 48V DC phantom power for up to four condenser and electret-condenser microphones. It uses XLR-type connectors for each channel of input and output. DC blocking is provided for easy coupling to input circuits ..................25.95

**CM-30-SA**
Adapts the CM-30 and CM-31 for use on a mic stand or boom ..........................29.95

**CM-SM**
Shock mount for CM-700 and CM-150......74.95

**CM-SB**
A stereo bar for the CM-700MP matched-pair mics..............Call

**LM-SM**
A fully adjustable shock mount for the LM-300a and LM-300aL, the LM-SM reduces mechanically induced noise. The rubber isolator is highly stable and securely holds the mic in place ..........................39.95

**LM-301-SMA**
Adapts the LM-301a for use with the LM-SM shock mount.................................Call

**ASA-2**
A stand adapter for the CM-200a and CM-310a hand-held microphones........29.95

**ASA-4**
A stand adapter for the CM-700 and CM-150 microphone..........................29.95
Miniature Microphones

Designed for close-miking applications, the 4060, 4061 and 4062 are almost invisible prepo-
larized omnidirectional miniature condenser microphones with a 5.4mm vertical diaphragm
that deliver unsurpassed audio quality. Specially designed for maximum performance under
the often difficult conditions when mounted directly on the human body, the utmost atten-
tion has been paid to the microphones’ resistance to humidity. A double vent protection sys-
tem together with water resistant materials inside the microphones make it almost impossible
for moisture to cause the mics to fail. Furthermore, by changing the protection grids, the mics
can be acoustically modified according to the placement of the microphone on the body. A
wide range of connection adapters makes it possible to use the mics with almost any profes-
sional wireless systems available — even on 48v phantom power.

The three mic types are acoustically identical, but differ in their sensitivity and self-noise:
The 4060 has the highest sensitivity (20mV/Pa), and is able to handle sound pressure levels up to 134dB before clipping occurs. The 4061’s sensitivity is 10dB lower to match some of the more sensitive transmitters on the market and offers a maximum SPL of 144dB . The 4062 is the high-SPL specialist, capable of handling up to 154dB before clipping occurs.

◆ Two different protection grids are supplied with mic for acoustic
equalization. If the mic is mounted on a performer’s head, the short
plastic protection grid can be used to provide a 3dB soft boost at 8-20kHz. When the placement is on the performer’s chest, a 10dB boost at 12kHz
is required for the microphone to sound neutral. This unique acoustic
equalization is noiseless and is provided by the longer protection grid.
the grids can be cleaned if they become clogged with make-up, etc.

◆ The self-noise of the 4060 is only 23dB(A), absolutely unique for
a microphone of this size. Effective dynamic range is 97dB, and
there is 14dB headroom before clipping occurs.

◆ The 4060 and 4061 are primarily designed for use with wireless
systems in theater or TV. A variety of ultra-compact adapters
make it possible to match any of the miniature mics to virtually
any wireless system — even on 48v phantom power.

4065/ 4066

Miniature Microphone Headband Solutions

The 4065 and 4066 are headband mounted condenser microphone with the same
prepolarized omnidirectional cartridge element as in the 4061. They are specially
designed for maximum performance when mounted directly on the human body.
A double vent protection system, a drop stopper on the tube, and water resistant
materials inside the microphone, make it almost impossible for the 4065 or 4066
to fail because of humidity.

The 4065 offers maximum performance for stage, broadcast and home studio
applications. It is designed for everyday use on the same performer. The head-
band is exceptionally lightweight and easily formed to the individual shape of
each performer’s head, providing a firm yet comfortable fit. Any adjustment in
the bend is easily done with a soft touch, around a wide curved object.

The 4066 is primarily for head mounting on actors, public speakers, broadcast
hosts, musicians and singers. The system is quickly and simply adjustable— and
extremely versatile. It is designed for a different user everyday. The headband fea-
tures very robust construction, choice of left or right mounting and color change
(simply by changing to a boom in another color). It even enables two mics to be
used on the same headband for situations in which continuity can never be com-
promised. The boom can be used separately when the headband isn’t needed.
Miniature Microphone with Presence Boost

A miniature omnidirectional condenser microphone, the 4071 features a specially-designed, fixed microphone grid with a soft presence boost of typically 5dB at 4-6kHz—the area of speech intelligibility, clarity and definition of voices and instruments. While clarity seems to be missing from chest-worn microphone placement, the 4071 will make voices cut through. Ideal for ENG/EFP use on the reporter in studio or in the field. Or for film production use, with hidden microphone placements on the actors.

Otherwise identical to the 4061 (uses the same prepolarized omnidirectional miniature condenser capsule), the 4071 does add an acoustic low-cut filter so the built-in preamp (or wireless system) will have much larger headroom.

When recording voices from mic placement on a performer's body, no frequency below 100Hz is attractive. For this reason, the airing vent in the capsule has been specially designed to make the frequency response 2dB attenuated at 100Hz, with a 3dB per octave roll-off. Also reduces low-frequency rumble from wind noise when used outside.

DAK4060 Accessory Kit

This is a complete accessory kit with room for a Miniature Mic and one or more connection adaptors. The box is extremely rugged so it gives both microphone and accessories perfect protection.

The box has a transparent lid, so you can make sure you have a complete kit without opening the box at all the time.

Includes: 5 colored (mix) miniature windscreens (DUA0565), Black Vampire Pin, Black Magnet, single clip lapel and 3 single tie pins

DAK4070 Accessory Kits

Designed for use with the 4071 Microphone, the DAK4071-E Accessory kit is made for ENG/EFP when the mic can be visible, while the DAK4071-F is for film or TV when the mic can't be visible. Each kit includes a hard case with a transparent lid and one or more connection adaptors.

DAK4071-E: Black Double Pin, Single Pin Holder, Double Lock Clip, windscreens (7 colors), windjammer and mesh.....$84.95

DAK4071-F: Miniature concealer, Tie Pod, Mic Tape, Double-sided Tape for Concealer and Tie Pod, windjammer and mesh....$119.95

4060 High Sensitivity Miniature Mic (specify Black, Beige or White)..........................Call
4061 Low Sensitivity Miniature Mic (specify Black, Beige or White)..........................Call
4062 X-Low Sensitivity Miniature Mic (specify Black, Beige or White)..........................Call
4065 Miniature Mic Headset, Microdot .................................................................Call
4066 Miniature Mic Headset, Microdot (specify Black or Beige and Left or Right).........Call
4071 Miniature Microphone with Presence Boost ....................................................Call

IMK4061 Instrument Microphone Kit

Designed for close miking a wide variety of musical instruments, the IMK 4061 consists of a 4061 Miniature Mic, and an XLR adapter, together with a selection of unique mounting accessories including holders for attachment to stringed instruments, universal surface mounts with double sided tape for use with guitars, wind instruments, drums and percussion, a magnet holder for attaching the mic to drum rims or the frames of pianos, and foam windscreens.

Single Clip (DM M 0001) ..................$17.95 Miniature Magnet, White (DM M 0003-W) $27.95
Single Pin, Black (DM M 0002-B) ......$16.95 Lapel Single Clip (DM M 0004) .............$10.95
Single Pin, White (DM M 0002-W) ...$16.95 Single Tie Pin, 3pc. (DM M 0005) ..........$14.95
Miniature Magnet, Black (DM M 0003-B) ......$27.95 Cleavage Mount (CLV-1) .............$14.95
Miniature Windscreens, 5 pc. (specify black, red, blue, yellow, green, white, beige) ......$17.95

Acoustic Modification Kits

Soft Boost

These kits consist of 5 protection grids. When fitted the grids introduce a 3dB soft boost around 8-20kHz for applications where the mics need to be placed on the head of the performer. The metal grid is anodized stainless steel.

DUA6001 (Black) ......................$56.95
DUA6003 (Beige) ......................$56.95
DUA6005 (White) ......................$56.95

High Boost

These kits consist of 5 protection grids. When fitted the grids introduce a 10dB soft boost around 12kHz for applications where the mics need to be placed on the chest of the performer. The metal grid is anodized stainless steel.

DUA6002 (Black) ......................$56.95
DUA6004 (Beige) ......................$56.95
DUA6006 (White) ......................$56.95
Compact Cardioid Microphones

When microphones have to be out of sight, but maximum clarity and signal are essential, there is only one choice—DPA’s high performance Compact Cardioid microphones. Phantom-powered condenser mics, the 4021, 4022 and 4023 use the same type of cartridge as the 4011 Standard, but are preamplified using a built-in, ultra-small, thick-film mounted FET-preamplifier. The result is exceptionally compact, high performance mics ideally suited for the unobtrusive miking of all types of television, film, theater and live performances—as well as for studio applications. In fact, their linear frequency response from 40Hz to 20kHz (±2dB) together with their ultra-small design makes them the perfect choice whenever high definition audio and insignificant size is paramount.

The 1.2˝ **4021** has its cable (5m) side-mounted, which mechanically is perfect for situations where the mic needs to be mounted directly on string or wind instruments or on a stand.

The 1.38˝ **4022** has its cable (5m) rear-mounted, for situations where the microphone needs to be suspended from its own cable or mounted on a stand.

The 1.18˝ **4023** has a standard LEMO-connector for simple and safe mounting and removal of the microphone and to provide maximum ruggedness when in use.

- For on-camera recordings with live audiences and artists, their matte black finish gives them a classic yet unobtrusive appearance.
- For sound reinforcement in concert halls, theaters and churches, they provide clean, natural sound, with a high gain-to-feedback ratio that limits the effect of reflections.
- In film and TV studios, they are excellent for off-camera recording of voice or Foley work.
- They include the SM4000 Suspension Mount and DUA0020 windscreen.

3521 Compact Cardioid Stereo Kit

The 3521 is a complete stereo kit with two 4021 Compact Cardioid Mics carefully matched within 2dB on frequency response, sensitivity and self-noise. Designed especially for low-profile mounting inside a piano, with the supplied XY/ORTF holder the kit is also exceptional as a compact stereo pair for applications such as overhead for drums, horn or strings sections, choirs, main or additional spot pair for small or big acoustic ensembles. In addition to the two 4021 mics, the kit includes two GM 4000 Gooseneck Mounts, two MB4000 Magnet Bases and the CX04000 compact XY and ORTF holder.

4026/4027/4028

Compact Wide Cardioid Microphones

The 4026, 4027 and 4028 are phantom-powered compact condenser microphones with the same type of cartridge as the 4015 Standard Series wide cardioid microphone, but are preamplified using a built-in, ultra-small, thick-film mounted FET-preamplifier. Their linear frequency response together with a nice and subtle high frequency lift give that brilliant sparkle of purity, which will bring your sound to a higher level. And with unbelievable depth and precision, they will exceed your expectations on choirs, percussion, grand pianos, reed and brass instruments and much more. They include the SM 4000 Suspension Mount and DUA0020 windscreen.

The **4026** has its cable (5m) rear-mounted, for situations where the microphone needs to be suspended from its own cable or mounted on a stand.

The **4027** has its cable (5m) side-mounted, which mechanically is perfect for situations where the microphone needs to be mounted directly on the musical instrument or on a stand.

The **4028**’s 5-meter cable is attached with a standard LEMO-connector for easy mounting and removal of the microphone capsule, and for maximum ruggedness when in use.
Compact Omni (12mm Cartridge) Microphones

These phantom-powered omnidirectional condenser mics use the same type of mic cartridge as the 4007 Standard reference mic but are preamplified using a built-in, ultra-small, thick-film mounted FET-preamplifier. This 12mm (0.417”) diameter cartridge gives them impressive SPL handling capabilities, as well as extended frequency range and excellent phase response. They are also insensitive to handling noise and humidity. Extremely linear frequency response from 20Hz to 40kHz (±2dB) and 144dB SPL capability makes them the professional choice in close miking situations with percussion, saxes, horns, wind instruments or grand piano. They include the DUA0030 windscreen.

Compact Omni (16mm Cartridge) Microphones

When mics need to be small, lightweight and inconspicuous, but quality is paramount, the 4051, 4052 and 4053’s compact design and clean transparent sound make them the perfect choice for theater opera and concert halls where there is a live audience, as well as film applications— both in the studio or on location. They use the same type of mic cartridges as the 4006 Standard where their 16mm (0.63”) cartridge provides impressive sensitivity characteristics, an extremely linear frequency response and a low-noise floor. This makes them ideally suited for all types of low SPL recordings while their wide dynamic range also enables recording at higher SPLs without worrying about clipping or distortion. Additionally, the mics are insensitive to handling noise, pop-noise and humidity, and exhibit no proximity effects. The 16mm Compact Omni’s include the DD0251 Near Field Grid and DD0297 Diffuse Field Grid.

The 4033’s and 4053’s 5-meter cable is attached with a standard LEMO-connector for easy mounting and removal of the microphone capsule, and for maximum ruggedness when in use. The 4036 and 4052’s 5m cable is mounted behind the mic axis for situations where the mic needs to be suspended from its own cable, or concealed off camera. They can also be mounted on the supplied tie-pin clip. The 4037 and 4051 have their 5m cable mounted at 90° to the microphone axis which mechanically is perfect for situations where the microphone needs to be mounted directly on the musical instrument.

### 3552 Compact Omni Stereo Kit

The 3552 is a complete stereo kit with two carefully matched 4052 Compact Omni Mics. Designed especially for low-profile mounting inside a piano, the supplied goosenecks can also be mounted directly on mic stands for various A-B stereo applications such as a full orchestra, choirs and other ambient recordings. In the A-B stereo principle, time differences will act as stereo clues to enable the listener to “capture the space” in the recording, and experience a vivid stereo image of the complete sound-field with a full bass response. In addition to the two 4052 mics, the kit includes two (of each) DD0251 Near Field Silver Grids, DD0297 Black Diffuse Field Grids, UA0777 Nose Cones, GM 4050 Goose neck Mounts and MB4000 Magnet Bases.

### Optional Accessories for Compact Mics

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mic Holder for Cello (CH4000)</td>
<td>249.95</td>
</tr>
<tr>
<td>Mic Holder for Violin/Bass (VH4000)</td>
<td>249.95</td>
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<tr>
<td>Mic Holder for Sax/Horn (SAX4000)</td>
<td>229.95</td>
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<td>Gooseneum 0.75” (19mm) (GM4000)</td>
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<td>Gooseneum 0.63” (16mm) (GM4050)</td>
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<td>Suspension Mount (SM4000)</td>
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<td>Compact XY Holder (CXY4000)</td>
<td>79.95</td>
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<tr>
<td>Extension for CXY4000 (EXY4000)</td>
<td>24.95</td>
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</tbody>
</table>
Low Noise Omnidirectional Microphone

Using a German silver diaphragm and a pre-aged capsule, the 4006 is in use all over the world with professional studios, broadcasting facilities, and anywhere the utmost in reliability and repeatability are required. The 4006 exhibits no proximity effect and an inherent insensitivity to popping, making it ideal for close-miking vocals, strings, woodwind or plucked instruments.

The 4006 is an omnidirectional condenser microphone with an extremely linear frequency response from 20Hz to 20kHz, high sensitivity and a low noise-floor. The 4006 is phantom powered (P48), which together with the extended range of acoustic pressure equalizers and different protection grids turns the 4006 into an extremely cost effective solution. All in all the 4006 can be changed into 7 different microphone versions acoustically.

- Superior sensitivity characteristics, an extremely linear frequency response and a low noise floor make the 4006 the ideal choice in most miking applications.
- The capsule holds a 16mm (0.63-inch) diaphragm on a housing of German silver. During production capsules are pre-aged and rigorously tested, ensuring that the mic remains extremely stable over time, in all kinds of environments.
- Use at high SPL levels (up to 124dB) without worrying about clipping or distortion
- Inherently insensitive to popping and exhibiting no proximity effect, the 4006 is equally well-suited for close-miking vocals, strings, woodwind or plucked instruments.
- In addition to the silvered protection grid that gives it the greatest possible accuracy on-axis, the 4006 also includes a Diffuse-Field Grid (DD0297) as standard. The grid guarantees excellent linear frequency response in the diffuse field, and in addition, provides a high-frequency boost when miking closer to a sound source.
- Includes a windscreen, mic clip, calibration chart and a rugged case. The chart contains individually-measured on-axis frequency response, sensitivity and A-weighted equivalent noise level with other essential data.
- Optional accessories include a Nose Cone (UA0777) which gives a true omnidirectional response, even at higher frequencies, and Acoustic Pressure Equalization (APE) Kits that modify the directivity and frequency response characteristics of the mic without compromising audio integrity.

4007 High SPL Omnidirectional Microphone

A high-SPL omnidirectional microphone, the 4007 is a phantom powered (P48) close miking specialist with an extremely linear on-axis frequency response from 20Hz to 40kHz (+2dB). This high-performance condenser microphone has an unbeatable dynamic range of 124dB from the noise floor to 1% THD and is capable of handling up to 155dB SPL peak before clipping occurs. The 4007 has through its total acoustical transparency and ultra-high SPL handling capability gained a reputation as being the first choice for picking up drums, percussion and brass instruments, whenever the natural and non-distorted result is paramount. Last, due to its linear qualities, the 4007 can also be used as reference mic in both microphone comparisons and acoustic test equipment.

- Specially designed to handle extremely high SPLs with optimum performance, the 4007’s 12mm cartridge can handle peak sound pressure level fo 155dB before clipping.
- Small cartridge diameter also results in an extended on-axis frequency response, and excellent phase response and a high degree of omnidirectivity.
- The ultra-high pre-polarization voltage allows for a larger diaphragm-to-backplate distance, lowering distortion levels to an absolute minimum.
- Close-mike drums, percussion and brass with total accuracy for a clean, undistorted dynamic sound as never before.
- Includes windscreen, mic clip and a calibration chart.
Cardioid Microphone

The 4011 is a cardioid condenser microphone with a linear frequency response from 40Hz to 20kHz (±2dB), totally flat off-axis qualities, so any leakage that occurs from off-axis sound sources is still a faithful reproduction of these sounds, though attenuated according to the true first order cardioid pick-up pattern.

The 4011 is phantom powered (P48), transformerless and has an extremely high SPL handling capability of 158dB before clipping occurs. These special qualities have made the 4011 one of the most popular microphones in the recordist's toolbox and the span of applications is limited only by your imagination.

- First order cardioid pick-up pattern offers superb separation between sound sources. Ideal for multi-track recording applications, classical recording or live situations.
- Able to handle extremely high SPLs before clipping (up to 158dB), the 4011 is equally well-suited for close-up work as well.
- Flat on-axis frequency response, together with an excellent phase response, delivers clean, uncolored sound that is totally faithful to the original.
- The off-axis response is similarly smooth so that any leakage is likewise an accurate reflection of the original.
- Second and third order distortion characteristics have been optimized, resulting in very low harmonic and intermodulation distortion. The 4006 is also unaffected by amplitude, phase and distortion problems.
- Includes windscreen, mic holder and individual calibration chart.

4015 Wide Cardioid Microphone

The 4015's polar pattern is a wide cardioid (also known as hemisphere), attenuating less to the sides and back than a traditional first order cardioid. It is designed with a linear on-axis frequency response from 40Hz (±2dB) to 20 kHz (+3/-1dB) at 60 cm, with a soft high frequency lift from 10 to 15 kHz of max. 3dB. The 4015 is the perfect fill-in when an omni is too ambient and a cardioid is too narrow.

The 4015 features the supreme accuracy, definition and resolution of the legendary 4011 to offer natural sounding recordings, however it has a richer bass response than the 4011 and will therefore serve you well both in close-up work as well as diffuse field tasks. The 4015 is phantom powered (P48), transformerless and can handle 158dB SPL peak before clipping occurs. Ideal for recording vocals, supporting sections of an orchestra, miking a conference panel, a percussion set-up or a grand piano.

4003/4004/4012/4016 130v Omnidirectional and Cardioid Microphones

DPA also offers the 130v high-voltage equivalents of the 4006, 4007, 4011 and 4015. Acoustically identical, these models differ in the powering system. The high-voltage system enables them to handle approximately 10dB higher SPL. The extra headroom, together with the excellent phase, transient and distortion performance offered by the 130v powering system, offers a true investment in versatility. To power a 130v microphone, you need the optional HMA4000 Hi-Voltage Microphone Amplifier. A high quality power supply and mic amp, the HMA4000 has a transformerless, high-level, single-ended or electronically balanced signal path that preserves the integrity of the audio signal and delivers excellent phase and distortion characteristics. These powerful features make the 4003 (Omnidirectional), 4004 (Hi-SPL Omnidirectional), 4012 (Cardioid) and 4016 (Wide Cardioid) with the HMA4000 perfect for direct-to-track recordings.
4006/4011

Large Diaphragm Microphones

The 4041 series are 1” omnidirectional microphones with the totally transparent M M P4000 preamp (except the 4041-SP) to deliver outstanding performance. They have extremely low self-noise of 6dB (typical) and 7dB (maximum). With a THD less 0.5% at 120dB SPL peak, they are a top choice with a dynamic range of 113dB. The specially treated stainless steel diaphragm and housing give the capsule unique immunity against ambient temperature differences. The backplate is polarized with 200v providing extremely high sensitivity and SPL handling of up to 144dB (134dB on the 4041-SP) before clipping. The frequency response is 10Hz to 20kHz with a 4-6 dB soft boost around 8kHz.

The 4041 mics have a unique modular design enabling the capsule to be unscrewed from the preamp and offering you the choice between a 130v or 48v phantom-powered solid-state preamplifier and a 130v tube technology preamp. The solid state is used for the most transparent and faithful reproduction, whereas the tube system adds a slight musical coloration to the recording.

4041-SP
The 4041-SP uses 48v phantom power. It offers the same superior sound quality as the high voltage versions, since the capsule is the same, with very slight changes in the specifications. Because it is part of the modular system, it is possible to upgrade to the 130v solid-state or tube preamp.

4041-S
The 4041-S uses the M M P4000-S solid-state preamp which offers a total linear and transparent signal path. The low noise output stage is driven as a class A unity gain impedance converter. H M A4000 Mic Amplifier supplies 130v power allowing extremely high audio signals without adding any distortion.

4041-T
The 4041-T uses the M M P4000-T mic preamp module and incorporates a pentode vacuum tube driven as a cathode follower in a class A unity gain output stage. The high-quality subminiature vacuum tube is heated by the 6v supplied with the H M A4000 Mic Amplifier.
**UA0897 Shock Mount**

Ultra-compact, robust design significantly reduces the amount of vibration, that reaches the microphone without having adverse acoustical effects. Unlike other shock mounts, the vibration reduction is clearly specified. It can be used stand mounted in the studio, or in hand-held boom applications. Fitted with a thread adapter, which allows usage on up to three of the most popular international standard threads used on microphone stands.

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**UA0836/UA0837 Stereo Booms**

The UA0836 and UA0837 are precision-crafted microphone booms for secure mounting of microphone pairs for A-B stereo recordings. They have adjustment possibilities for both mic spacing and angle. The boom can be mounted on a stand, or suspended from wires, and has centimeter graduations on the boom and angle graduations on the microphone holders for quick and easy configuration of the recording set-up. (The UA0836 includes microphone holders, the UA0837 does not). The stereo boom can be fitted with the DUA0019 19mm spacer, which allows you to assemble an XY stereo or ORTF stereo setup with any two 4000 series mics.

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**UA0777 Nose Cone**

Designed for the 4003, 4006, 4051, 4052, and 4053 mics. The Nose Cone gives your mic a perfect omnidirectional response across the whole audio frequency range. It counteracts the directional characteristics that omnidirectional mics exhibit at higher frequencies, and guarantees an even tonal balance of sound arriving at all angles of incidence, but with a high-frequency boost on-axis. Especially suited for increasing the ambiance to your recordings, or for miking a variety of sound sources that are positioned around the microphone.

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**Acoustic Pressure Equalizers (for 4003 and 4006)**

The 30mm sphere-shaped L30B gives a mild modification of the mic’s on- and off-axis frequency responses, and a slight change in the direction-to-reverberation ratio. This gives recordings greater presence, nearness and clarity on-axis (especially around 4kHz). An on-axis boost, between 2 and 8kHz, and high-frequency roll-off off-axis, will sometimes help you capture the subtle audible details of both musical instruments and voices. The L40B (40mm) offers a more noticeable on-axis boost between 2 and 8kHz, and a stronger off-axis attenuation than the L30B. This gives a marked increase in the directivity of your recordings (at 4kHz, the front-to-back sensitivity ratio is 8dB), and decreases the effects of reverberation and off-axis sources. Modify the spectral characteristic of a source by simply altering the angle of incidence to give a frequency boost, a flat response or an attenuation.

The L50B (50mm) offers a stronger on-axis boost and off-axis attenuation than the L30B and L40B. Its larger dimensions accentuate the on-axis boost at lower frequencies and allow off-axis sources to be strongly attenuated above 1kHz. This gives recordings a more intense sensation of source clarity and presence, a marked increase in brightness, and extend the effective reach of your mics.

The 110mm cylinder-shaped L110C creates two distinct directional responses - or a combination of both - depending on the position of the sound source. Vertically oriented, there is maximum attenuation between 150° and 250°; horizontally oriented, there is a stronger high-frequency roll-off in the entire rear hemisphere. Plug, a strong on-axis boost between 3 and 4kHz, and powerful attenuation off-axis, allows excellent highlighting and close-miking source-separation without the problems of proximity boost.

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**UA0639 Mic Clip**

Of a traditional design, but with additional modifications, that ensure a tighter and firmer grip on the microphone, while still enabling it to be secured and removed repeatedly with ease. Ideal for 4000 Series Standard Mics. Thread adapter allows use on three of the most popular international standard threads used on mic stands.

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**DUA0090 Pop-filter**

Designed for the everyday use in the recording studio where acoustic performance and mechanical reliability is of the utmost importance. Elegant yet sturdy mechanical design allows a quick and easy positioning of the pop-screen in front of the mic. Thread adapter allows attachment to three of the most popular international standard threads used on mic stands. The (5.12-in) pop-screen does not attenuate the higher frequencies beyond the tolerance field of the microphone’s frequency response and can be replaced with new filters if necessary. Can be used with any microphone.
**QTC1 Omni-Directional Studio Microphone**

The QTC1 provides flat, extended frequency response, superb impulse response, very high sensitivity and that great Earthworks sound with lower self noise than other omni models. It is an extraordinarily accurate microphone, typically within ±0.5dB from 20Hz to 20kHz. More importantly, the QTC1’s impulse response is super clean. (Impulse information embedded within the tones of music is the detail needed to capture the experience of being there.) Clean impulse performance allows the QTC1 to transduce wave forms exactly. The QTC1 will provide a true and accurate representation of sonic events as they happened in the air, the experience of being there.

- The QTC1 is ideal for ambient miking and for quiet sources. It is also great for close miking.
- Capture the full size and natural texture of many difficult and complex sources.
- An excellent choice for all applications where natural, uncolored pick up of sound is the desired result.
- Excellent mic for Percussion, Piano, Guitar, Upright Bass, Strings, Vocals, Brass, Woodwinds, Location Recording of Classical, Jazz, Ethnic, Folk and Pop music. Also useful for Foley, ADR, sound effects and sampling.
- If you prefer transparency to coloration this is the microphone for you.

**TC30MK Omni-Directional Studio Microphone**

The TC30K is a cost effective general purpose omni which is accurate yet has a warm, life-like sound. It is optimized for fast, clean impulse response. Using a very small, very accurate omnidirectional capsule, a carefully crafted stainless steel body and innovative circuitry the TC30K delivers flat, Time Coherent response from 9Hz to 30kHz. It effortlessly handles explosive transients and simultaneously reveals subtle detail, delivering all of the sound as it happen in the air. By keeping time relationships coherent and transducing wave forms exactly, Earthworks TC30K accurately captures the experience of being there.

- The TC30K is superb for a surprising range of applications, capturing the full size and texture of many difficult sources ranging from moderate to extremely loud.
- Use for sources with significant impulse information, such as Percussion (Overheads, kick drum, hand drums, timbales & etc), Piano, Guitar (Acoustic and Electric), Upright Bass, Brass, Strings, recording live bands and many other applications. The TC30K is even useful for live sound in certain circumstances.
- The TC30K can be positioned very close to a source because it doesn’t exhibit the bass proximity effect. This allows you to apply the inverse square law to great effect when isolation is desired and to capture the range of up close sounds which are simply unavailable to mics which get boomy when you get too close. And although it delivers startling bass performance there is almost no handling noise.

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The TC30MK and QTC1 are both available as matched pairs. All Earthwork matched pairs include beautiful solid cherry boxes.
Earthworks Omnis are flat from well below 20Hz to well above 20kHz. However, flat and extended frequency response is not the sole reason for Earthworks great sound. It results from the speed and accuracy of Earthworks Time Coherent impulse response. Accuracy in the time domain allows you to capture the performance as it sounded in the room.

The QTC1 and TC30K are optimized to deliver time accurate performance, they don’t smear the time domain as much as most other microphones do. The impulse time settling time of 85 uses (TC30K) and 45 uses (QTC1) is faster than any other mic available. The QTC1 and TC30K are true and accurate but not in a cold, sterile way. They reveal all the warmth and texture of the source. They can be positioned close enough to a source to provide tremendous separation without boominess and to capture the incredible range of up close, detailed sounds which are simply unavailable to directional mics due to the bass proximity effect. And yet when used at a distance they capture the entire sound complete with a feel of being there. They also handle massive SPL (TC30K 150dB, QTC1 142dB), so it is unlikely that you will ever distort them even when close miking a kick drum. And despite having flat bass response to below 9Hz, Earthworks omnis have effectively no handling noise.

SRO Sound Reinforcement Omni

The SRO is a general purpose omni for live sound and recording. It handles huge SPL, has no proximity effect and no handling noise. It has fast clean impulse response and delivers accurate uncolored sound. Omnidirectional microphones are limited by feedback and leakage for many amplification applications. However, there are several types of applications for which they will deliver superior results.

For live sound try using the SRO to close mic loud stationary sources, like guitar amps, pianos and drums. Try it also for picking up on stage or room ambiance. This can be useful as a real world reference for in-ear monitors, as a reference for monitoring on-stage sound or to give the FOH (front of house) mixer a real world reference of what it sounds like in the room. An affordable SRO Box Set (not matched but close) is available for recording gigs and rehearsals as well as for general studio use.

The Earthworks Philosophy

Earthworks believes that there is more to human hearing than the range of frequencies which are heard as tones. Most recordings don’t live up to the sonic experience of being there with the live music. That is why Earthworks is convinced that audio equipment with extended frequency response and faster, cleaner time domain performance will yield more life-like results than with the slower more colored equipment of yesterday.

The time resolution of human hearing is 5 microseconds or better. This corresponds to frequencies beyond 80kHz. Most microphones smear frequencies in relation to time to such a degree that the relationships which existed in the air are audibly degraded. When you choose a microphone you get its time domain imprint on the track. Mics with poor time resolution will distort the signal beyond any practical recovery of the original.

Earthworks supports the concept that you can and should record acoustic events accurately enough to capture the sound as it happened in the room. This approach allows you to make your sonic coloration and texture choices later when you can consider them carefully and you still have recourse.

Traditional audio methodology is based on working around the limitations, personalities and quirks of the equipment—with Earthworks you never have to settle for less. That’s because Earthworks is dedicated to an audio nirvana they call ‘Perceptual Perfection.’
SR Series

Using carefully machined aircraft grade aluminum alloys plated with handsome hard coat finishes, the SR series mics are rugged and beautiful. They offer Earthworks being there quality in durable light-weight packages. They effortlessly handle high SPL transients while simultaneously revealing subtle details which lesser mics may miss. Bass response is flat at about 6-inches. Moving closer gives a little more warmth. They also have low handling noise. The cardioid models have an open easy to use pickup pattern with smooth uncolored rejection of off-axis arrivals. Every SR mic offers superb value and doubles for recording applications as well. Matched pairs of the SR77 and SR78 are available in a beautiful solid cherry box.

SR77
Precision Cardioid Studio Mic
The SR77 is a directional condenser microphone which delivers a natural, uncolored representation of the sound as it arrives at the front of the mic—maintains most of the being there quality of Earthwork's omnidirectional mics. On-axis performance is smooth and open. Its sonic timbre is uniform across its entire front hemisphere of pick up. On-axis, its frequency response is flat from 30Hz to 30kHz at 15cm; closer there is a little more bass, at ambient distances there is a little less. The SR77's impulse response is fast and smooth. It can handle very hot signals. It has very low handling noise. The off-axis rejection is very thorough and uncolored.

The SR77 offers superior performance for a wide variety of applications, especially guitar, sax, flute, drums and voice. It is also rugged enough for high quality sound reinforcement (there are no peaks to encourage feedback and the rear rejection is unusually good), and powerful enough for broadcast and vocal production where its lifelike clarity and detail enhance communication through realism.

SR87
Precision Hypercardioid Studio Mic
An exceptionally directional condenser microphone, the SR78 delivers a natural uncolored representation of sounds as they arrive at the front of the mic. Its impulse response is fast and smooth so it maintains most of the being there quality of Earthwork omnis.

The SR78 cleanly picks up what it is aimed at while just as cleanly rejecting arrivals from off-axis. And yet, the sonic timbre is uniform across the entire frontal hemisphere. The SR78 effortlessly handles quite hot signals while simultaneously revealing subtle detail. In the studio or on the stage the SR78 can pick a real acoustic instrument, like guitar, bass, sax, flute, drums or voice, out of an ensemble and still sound real. It is usable for any situation where you want natural uncolored sound but need supernatural rejection.

Concert tapers love the SR78 when they want to avoid bad sounding rooms. It is a powerful tool for broadcast and vocal production applications where its lifelike clarity and detail will enhance intelligibility and communications through realism.

Its light weight, low handling noise and awesome ratio of open on-axis pick up to uncolored off-axis rejection make it an excellent choice for boom work.

1021/1022/1024
Single-, Two- and Four-Channel Zero Distortion Technology (ZDT) Preamps

The 1021(single channel), 1022 (dual channel) and 1024 (4-channel) have no whistles and bells and no hum or distortion either. They provide exceptionally accurate gain. In the time domain they are picture perfect. Their frequency response is flatter and more wideband than most people dream of. In the real world, what you can hear with your ears, they are perceptually perfect. The primary gain path (XLR input-stepped gain-XLR output) is entirely differential. The total distortion is unmeasureable by normal measurement equipment. They are cleaner than most wire, but they have gain. Lots of it!
SR69
Cardioid Mic for Stage and Studio
Specs alone don’t convey the quality of this mic’s sound. When you hear it you will understand. As a vocal microphone the SR69 is spectacular. It accurately captures voice with just a bit of bass warmth available if you need it but no presence peak. It offers clean easy to use on-axis pick up and uncolored off-axis rejection. It is well protected from all popping of P’s and has low handling noise. It sounds great. As with other Earthworks mics you will need to use less EQ because what is there is all there and it is done right.
Superb performance makes the SR69 a good choice for many other live sound and studio applications as well. It covers a wide range of real acoustic sources, like choir, guitars, horns, flute and especially, drums and other percussion. The SR69 will cleanly handle kick drum. For hand drums alone every stage and every studio will benefit from using the SR69.

SR68
Hypercardioid Mic for Stage and Studio
As a vocal mic the SR68 provides an accurate representation of voice with excellent gain before feedback. It is lightweight and user friendly. It handles massive acoustic input levels and is well protected from popping Ps and wind noise. Up close the SR68 has punchy bottom end yet its handling noise is low. It is unsurpassed for choirs, as well as horns & woodwinds.
Removing the windscreen assembly reveals the SR68’s alternate persona. The SR68 delivers the sound of any instrument with uncanny realism and separation. Frequency response chart shows that it has flatter response above 10kHz with the windscreen off. For acoustic guitar and other stringed instruments the SR68 sounds perfect at 6” yet rejects off-axis arrivals, especially bass. For drums the SR68 will spot a snare or high hat, kick drum or even overheads. It is also good for miking piano.
Gooseneck Mics for Podiums, Choirs and Instruments

Flex Series microphones offer the same great sound and open easy to use cardioid pickup as the SR69 and SR71 but with a range of quiet, flexible neck lengths. These allow real time and real world adjustment of microphone positioning. Earthworks Flex mics are intended for podium use, hanging choir mics and for reaching into hard to reach places such as drums and hammer dulcimers.

Their on-axis sound quality is natural and uniform all the way out to 90° and yet arrivals from off-axis are rejected smoothly with very little coloration. This is a strong plus for church, civic and corporate podium vocal applications because an orator moving about in front of the mic will be picked up more evenly than with most microphones. The sound quality of the Flex mics is every bit as good as Earthworks’ other cardioids for applications ranging from acoustic guitar to choirs. The Flex mics will also cleanly handle very loud sources like drums and guitar amps. Flex mics are flat from 50Hz to 20kHz within ±2 dB at 6 inches. This level of accuracy is unusual in flexible microphones. The Flex mics facilitate intelligibility and communication through time accurate response. They are optimized for fast clean impulse response. This results in uncolored sound because the relationships between frequency and time are less smeared than with normal mics. They sound true to life and are user friendly.

M 720
The extra long M 720 is the best hanging choir mic. It can also be used to pick up a group of mixed musicians with minimal visibility. Its flexible neck allows it to stand cobra-like on a desk top without a stand. For extra flexible reach the FM 720 is superb.

FM 500
Half a meter is just the right length for most podium and church applications. The FM 500’s swan-like neck can be adjusted with very little handling noise and it will stay where you put it. It is a good size to position unobtrusively into an instrumental ensemble or in front of a choir for sound reinforcement or recording.

FM 360
Don’t let its diminutive size fool you. The FM 360 is the Napoleon of the bunch. It is powerfully equipped to totally dominate in situations which require a very low profile in order to get it right in tight places. The FM 360 will effortlessly handle applications ranging from tall podiums for short people to piano, drums and guitar amplifiers.

SIGMA 6.2
40kHz Time Coherent Reference Monitors

Available in black or cherry, Earthwork’s Sigma 6.2 system provides a reality check, delivering precision, time accurate sound-field reproduction. Accurate in time and frequency, their near perfect performance lets you hear all of the detail in your recordings. Their sonic accuracy is beyond question, the frequency response is flat and wideband, impulse response is fast and well behaved, and their step function chart looks like the theoretical text book ideal. The impedance vs. frequency chart shows them to have remarkably stable impedance which means the Sigma 6.2 is less subject to differences in amplifier quality.

Imaging is pristine. Their front to back depth of image is unparalleled. The way they sit in the room is more natural and less problematic than most loudspeaker boxes because care has been taken to avoid putting acoustic energy into the air beside and behind the cabinet. Their unique port design provides accurate bass reproduction and doubles as a convenient handle. The low frequencies are put into the room in the correct relationship to the rest of the signal. In conjunction with Earthworks microphones and preamps you will be able to hear the sound of the source through the loud-speaker for the very first time. The only way to hear it with better clarity is to be there when it is recorded.
Earthworks has become the standard for affordable, reliable reference microphones. These mics are accurate in the time domain as well as in frequency. Most microphones smear time information to such a degree that the relationships which existed in the air are degraded beyond any practical recovery of the original. Earthworks measurement mics are optimized for fast clean impulse performance. Having such fast impulse response dictates that these mics must have accurate wideband frequency response. For measurement the M30 is a very cost effective reference for SM AART, MLSSA, TEF, RTA and all audio band measurements. It has very clean and fast impulse response. Typically the M30 is within 1dB from 20Hz to 20kHz. The M550 is astonishingly accurate over an even wider frequency range.

### M30

The M30 is a very accurate microphone. It utilizes a very small, very accurate omnidirectional capsule, a carefully crafted stainless steel body and innovative circuitry to deliver time coherent response from 9Hz to 30kHz. 20 to 20kHz is not enough! This extended frequency response is essential for capturing sonic events accurately. In terms of the standard audio range the M30 is typically well within 1dB from 20Hz to 20kHz.

Operating the M30 is extremely simple. Using a good quality standard XLR mic cable connect the M30 to an active electronic microphone preamp which provides 48 volt phantom power with at least 10mA of current available. Adjust the preamp gain to the level required for your test equipment. The M30 has extremely low handling noise and does not require a shock mount. All windscreens effect the higher frequency performance, so they are to be avoided. When needed, a small ball type intended for a 1/4” lavalier will do the job.

### M30BX

The M30BX delivers the same calibrated 30kHz performance as the M30 reference mic—without the need for phantom power. It is powered by a single AA cell which will last 1,500 hours. An internal switch allows 14dB of gain. If your sound card has any gain at all, and the sound level is even moderately loud, the output of the M30BX will be enough that you won't need an external preamp. The M30BX is a handy and powerful tool for laboratory, field and production measurements. It also sounds great for recording.

### M550

Extraordinary impulse response. 30mV/Pa sensitivity. 4 Hz to 40 kHz ±1 dB, to 50 kHz +1/-3db. Laboratory grade accuracy for research beyond the brick wall. Omnidirectional. 48 volt phantom power.

<table>
<thead>
<tr>
<th></th>
<th>M30</th>
<th>M30BX</th>
<th>M550</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>Omnidirectional</td>
<td>Omnidirectional</td>
<td>Omnidirectional</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>48V Phantom, 10mA</td>
<td>AA 1.5V battery (2 months-1500 hours)</td>
<td>48V Phantom, 10mA</td>
</tr>
<tr>
<td>Min. Output Load</td>
<td>600Ω at pin 2 and pin 3</td>
<td>600Ω at pin 2 and pin 3</td>
<td>600Ω between pins 2 and 3</td>
</tr>
<tr>
<td>Peak Output Voltage</td>
<td>3V into 1kΩ, 10V into 5kΩ</td>
<td>3V into 1kΩ, 10V into 5Ω ohm</td>
<td>3V into 1kΩ, 10V into 5Ω ohm</td>
</tr>
<tr>
<td>Noise</td>
<td>27dB SPL equivalent (A weighted)</td>
<td>27dB SPL equivalent (A weighted)</td>
<td>22dB SPL equivalent (A weighted)</td>
</tr>
<tr>
<td>Peak Acoustic Input</td>
<td>150 dB SPL with 5kΩ capacitor coupled load</td>
<td>132dB SPL with 5kΩ ohm load, or with 14dB gain 118dB SPL</td>
<td>142 dB SPL</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>8 mV/Pa (-42 dBV/Pa)</td>
<td>8 mV/Pa (-42 dBV/Pa), or with 14dB gain 40mV/Pa (-28dBV/Pa)</td>
<td>30mV/Pa (-30.5 dBV/Pa)</td>
</tr>
<tr>
<td>Frequency Response on Axis</td>
<td>±1dB 9Hz to 27kHz, +1/-3 dB 5Hz to 30kHz</td>
<td>±1dB 9Hz to 27kHz, +1/-3 dB 5Hz to 27kHz, +1/-3dB 5Hz to 30kHz</td>
<td>+1/-3 dB 5 Hz to 50 kHz, ±1 dB 4 Hz to 40 kHz</td>
</tr>
</tbody>
</table>
Vocal and Instrument Microphones

15 years ago EV started a revolution in mic technology when they introduced a radical neodymium-based magnet structure to microphone design. For the first time, engineers, musicians and audio professionals had available to them mics with extended frequency response and increased power input, at very affordable prices. Now EV continues the revolution with VOB (“vocally optimized bass”) technology. This cutting-edge innovation provides the performer with reduced resonant distortion at low frequencies. In other words, it efficiently controls the “proximity effect,” or bass boost you hear in close-up microphone use, which tends to create “boomy” or “muddy” vocals, and replaces it with greater warmth and increased vocal clarity. The increased clarity permits greater working distances and ensures a clean, clear consistent sound that “cuts through the mix.”

N/ D167
Handheld Vocal Microphone

Your entry into the world of high-performance N/DYM microphones, the N/D167’s innovative design harnesses the increased power of a neodymium-based magnet design, allowing for dynamic, efficient microphone performance. With the power and clarity to “cut through the mix”, the N/D167’s acoustic response offers optimal performance in a live sound environment.

- Close proximity frequency response of 50Hz to 12kHz with a far range response of 100Hz to 12kHz
- Cardioid pattern for superior feedback rejection and acoustic isolation
- Neodymium-based magnet structure provides greater sensitivity and S/N ratio
- Comes complete with a stand adapter, zippered gig bag and EV’s exclusive Warm Grip handle for more comfortable feel

N/ D267a and N/ D267as
Handheld Vocal Microphones

Designed for live performances, the N/D267a and N/D267 are equipped with a controlled proximity effect that eliminates the boomy effects found in typical vocal microphones. Provides superior vocal clarity across all frequencies and in any environment. Also available in a switchable version (N/D267as).

- Close proximity frequency response is 45Hz to 12kHz with a far response of 100Hz to 12kHz
- VOB technology provides tailored bass response for controlled “proximity effect” and exceptional vocal clarity
- Cardioid pattern for superior feedback rejection and acoustic isolation. Has an integral microphone element shock mount.
- Neodymium-based magnet structure provides greater sensitivity and signal-to-noise ratio
- Comes complete with a stand adapter, zippered gig bag and EV’s exclusive Warm Grip handle for a more comfortable feel.
- N/D267a and N/D267as are the same except the latter features an On/Off switch

N/ D767a
Dynamic Vocal Microphone

The mic of choice among singers and engineers for concert and touring sound environments, the N/D767a provides outstanding vocal clarity in any application. VOB design provides the N/D767a with a tailored bass response for proximity control and excellent gain-before-feedback while supercardioid polar pattern provides superior feedback rejection and acoustic isolation. The mic also features multistage shock mounting for extremely low handling noise.

- Neodymium-based magnet structure provides greater sensitivity and S/N ratio
- VOB technology provides tailored bass response for controlled “proximity effect” and exceptional vocal clarity
- Supercardioid pattern for superior feedback rejection and acoustic isolation
- Close frequency response is 25Hz to 22kHz, far response is 50Hz to 22kHz
- Multistage shock mount for unmatched low-handling noise
- Warm Grip handle for comfortable feel and lower handling noise
- Includes stand adapter and gig bag
N/D468 Instrument Microphone

Designed for miking horns, drums, and acoustic and electric guitar, the N/D468's unique pivoting head insures perfect placement providing smooth, natural sound while capturing the inherent sonic excitement produced by any instrument. Supercardioid pattern provides superior rejection and acoustic isolation in any application. Innovative EV design harnesses the increased power of a neodymium based magnet design, allowing a large-diameter voice coil (up to 50% larger than other mics) for dynamic, efficient microphone performance.

N/DYM offers the power and clarity to “cut through the mix.” Whatever your instrument application the N/D468 will be a top performer.

- Provides a smooth frequency response independent of proximity. Easily withstands the high sound pressure levels and sharp transients generated by the close miking of musical instruments
- Supercardioid pattern for exceptional acoustic isolation and feedback rejection
- Close range frequency response is 30Hz to 22kHz, far range is 60Hz to 22kHz
- Flexible mechanical design for optimum positioning. Rugged steel construction for exceptional durability
- Includes stand adapter and gig bag

N/D478 Instrument Microphone

The N/D478 is a high performance instrument microphone that offers outstanding vocal performance as well. Designed for miking of acoustical and electric instruments as well as vocals, the N/D478's acoustic response presents optimal performance in both a live sound or studio environment. A “must have” in any microphone mix.

- Neodymium based magnet provides greater sensitivity and signal to noise ratio
- Close frequency response is 45Hz to 15kHz, far response is 100Hz to 15kHz
- Cardioid pattern for superior feedback rejection and acoustic isolation
- VOB technology provides tailored bass response for controlled “proximity effect” and exceptional sound clarity
- Warm Grip handle for comfortable feel and lower handling noise
- Includes stand adapter and gig bag

N/D868 Kick Drum/Bass Drum Microphone

The N/D868 is truly a top performer in any application. Whether in a live sound or studio environment, the N/D868 is able to handle incredibly high sound pressure levels without distortion or overriding the input mixer. With a response specifically designed to “kick” the N/D868 can be used is “as is”—no additional EQ required.

- Designed specifically for kick drum applications in live or studio environments, sensitivity is optimized for the high sound pressure levels found in bass drum miking
- No additional EQ required
- Frequency response is 20Hz to 10kHz
- Rugged steel construction for exceptional durability
- Includes stand adapter and gig bag

### Microphone Specifications

<table>
<thead>
<tr>
<th>Microphone Type</th>
<th>N/D167</th>
<th>N/D267a/as</th>
<th>N/D767</th>
<th>N/D468</th>
<th>N/D478</th>
<th>N/D868</th>
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<tbody>
<tr>
<td>Element Type</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Response (Hz)</td>
<td>50 - 12k</td>
<td>45 - 15k</td>
<td>35 - 22k</td>
<td>30 - 22k</td>
<td>45 - 15k</td>
<td>20 - 10k</td>
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<td>Output Level Sensitivity</td>
<td>-52 dB</td>
<td>-52 dB</td>
<td>-51 dB</td>
<td>-51 dB</td>
<td>-52 dB</td>
<td>-52 dB</td>
</tr>
<tr>
<td>Open Circuit Voltage</td>
<td>2.3 mV/Pascal</td>
<td>2.9 mV/Pascal</td>
<td>3.1 mV/Pascal</td>
<td>3.1 mV/Pascal</td>
<td>2.9 mV/Pascal</td>
<td>1.0 mV/Pascal</td>
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<td>600 Ω</td>
<td>300 Ω</td>
<td>300 Ω</td>
<td>150 Ω</td>
<td>300 Ω</td>
<td>150 Ω</td>
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<tr>
<td>Dimension</td>
<td>181 x 52mm</td>
<td>181 x 52mm</td>
<td>181 x 52mm</td>
<td>115 x 52mm</td>
<td>181 x 52mm</td>
<td>133 x 60 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>238 g</td>
<td>238 g</td>
<td>260 g</td>
<td>190 g</td>
<td>247 g</td>
<td>295 g</td>
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</table>

0 dB = 1mW/Pascal (@1000Hz) | at 1000Hz
Professional Vocal and Instrument Mics

Designed for the working musician, the Cobalt series sets the standard for performance and value. A perfect blend of aesthetics, high performance and durability, Cobalt mics offer excellent vocal intelligibility, EV’s radical neodymium-based magnet structure, exceptional feedback rejection at high SPLs, low handling noise, extended frequency and controlled proximity effect—professional-quality performance at a price that working musicians can afford. Whether you’re a lead vocalist or miking an antique dobro, a vintage guitar amp, brass or percussion, Cobalt mics keep your tone “intact.” Additionally, each includes a rugged carrying case and gig bag—perfect for the rigors of the road.

Co4 Instrument Mic

The Co4 yields outstanding performance when miking acoustic and electric instruments, as well as vocals. It uses a dynamic neodymium element with a cardioid pattern (excellent for stage or studio) providing a frequency response of 50Hz – 18kHz. The Co4 also features a unique “floating head” construction. The mic capsule is encased in a die cast zinc inner housing that is shock mounted inside an outer zinc housing. This gives it tremendous durability combined with superb shock isolation. Yet, the Co4 maintains a small profile that makes it perfect for tight miking applications. Excellent for stage or studio, the Co4’s versatility makes it a “must have” in any mic mix.

Co7 Crossroad Vocal Mic

The perfect choice for the performer who wants hassle-free sound—whether on tour or getting serious in the studio, the Co7 performs without the feedback problems of competitive models. Built to the same standards as EV’s N/DYM microphones, the Co7’s low handling noise and versatility make it perfectly suited for critical acoustic settings as well. Features include a dynamic neodymium element, cardioid pattern for superior feedback rejection and a frequency response of 50Hz - 18kHz.

Co5 Classic Vocal Microphone

Designed for the performer who prefers a careful balance of highs, midrange and bass, the Co5 offers exceptional vocal intelligibility with controlled proximity effect. Got the blues? Pull out your harp. With the Co5 you get clarity and power—when you want it. Dynamic cardioid mic with a neodymium magnet structure and a frequency response of 50Hz-15k Hz.

Co9 Premium Vocal Mic

A favorite among vocalists across musical genres. A slight bass roll-off and accentuated mid range make this a superb, world-class sound transducer. Features a dynamic neodymium element, cardioid pattern, and a frequency response of 50Hz - 18kHz.

Co11 Condenser Vocal Mic

A high quality handheld condenser microphone with extended frequency response and wide dynamic range, the Co11 is ideal for anyone that appreciates the crisp high end and warm proximity effect that comes from a top condenser mic. Features a high compliance shock mount that makes handling noise “go away,” and comes in a rugged die cast housing with the famous EV M emraflex dent resistant grille screen.

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>Co4</th>
<th>Co5</th>
<th>Co7</th>
<th>Co9</th>
<th>Co11</th>
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<tr>
<td>Polar Pattern</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Self-Biased Condenser</td>
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<td>50 to 18k</td>
<td>50 to 18k</td>
<td>50 to 18k</td>
<td>50 to 18k</td>
<td>50 to 20k</td>
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<tr>
<td>Open Circuit Voltage (1000Hz)</td>
<td>2.2 mV/PA</td>
<td>3.2 mV/PA</td>
<td>3.0 mV/PA</td>
<td>3.2 mV/PA</td>
<td>4.0 mV/PA</td>
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<td>Input Impedance</td>
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<td>600 Ω</td>
<td>600 Ω</td>
<td>600 Ω</td>
<td>250 Ω</td>
</tr>
<tr>
<td>Included Accessories</td>
<td>Stand adapter, zippered vinyl carrying pouch and/or hard-shell case</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>5.8 x 0.9&quot;</td>
<td>6.7 x 2.08&quot;</td>
<td>6.7 x 2.08&quot;</td>
<td>6.7 x 2.08&quot;</td>
<td>6.8 x 2.1&quot;</td>
</tr>
<tr>
<td>Weight Net</td>
<td>12 oz.</td>
<td>10.8 oz.</td>
<td>11.7 oz.</td>
<td>11.8 oz.</td>
<td>10.3 oz.</td>
</tr>
</tbody>
</table>
635A Dynamic Omnidirectional ENG/EFP Mic

Probably the most popular and well-known ENG/EFP microphone in the world, the 635A has survived being dropped, run over, thrown and even being shot while on location for film, TV and radio remotes. The 635A’s uniform frequency response (80Hz-13kHz) is specially shaped for up-close vocals. Also available in black (635A/B) and with a Neodymium element (635N-D-B).

- **635A • 635A/B**
  - Completely pop-free performance
  - Four-stage pop and dust filter
  - Internal effective shock absorber
  - Includes stand adapter

- **635N-D-B**
  - N/DYM element offers higher output
  - Acoustalloy diaphragm material for very smooth response over a wide frequency range
  - Integral windscreen and blast filter

RE50/B • RE50N/D Omnidirectional Dynamic Mics

The RE50/B and RE50N/D are specially shock-isolated, omnidirectional, dynamic microphones created for the most exacting professional applications. Incorporating advanced shock-mounting techniques, they are designed particularly for hand-held broadcast and sound reinforcement use. Handling and clothing noise, even cord shock are isolated from the mic element so that mechanical induced noise is greatly reduced.

- No muddy lows when used near lips
- Acoustalloy diaphragm material for very smooth response over a wide frequency range
- Dyna-Damp for extremely effective handling noise isolation
- Four-stage pop filter prevents dust and magnetic particles from reaching the diaphragm
- RE50/B’s attractive, non-reflecting, semi-gloss black finish is ideal for on-camera use
- Integral windscreen and blast filter provides excellent protection from wind noise, excessive sibilance, and “popping”
- They include a stand adapter, vinyl carrying pouch and hard shell case

ENG-618 Integrated Boom Pole/Shotgun Mic

Integrating a shotgun microphone and a boom pole with built-in headphone amplifier, the ENG-618 is ideal for ENG work. It features a perfectly balanced, ergonomically designed graphite fiber K-Tek boom pole that provides great strength with minimum weight and a permanently attached back electret shotgun microphone with superior selective pickup performance. The six foot boom pole and microphone collapses to a mere 18” for easy transport.

- Hypercardioid-line (shotgun), back-electret condenser microphone
- 200 Hz roll-off circuit lets you precisely tailor the sound quality
- Finely crafted, high-density K-Tek graphite fiber boom-pole with a burnished finish
- Low-battery LED indicator
- 50Hz to 20kHz on-axis frequency response that reduces handling noise
- Balanced XLR connector
- Supplied with windscreen and pouch
- Powered by external 12- 52v phantom power or by the 9v internal battery that is used to power the headphone amplifier
RE20 and RE27N/D Dynamic Cardioid Microphones

The RE20 and RE27N/D are professional-quality dynamic microphones designed for broadcast, high-quality recording, and sound reinforcement applications. Exceptional sensitivity and wide frequency response, coupled with excellent transient response and inherently low noise of the dynamic transducer, all combine to ensure a superior S/N ratio—comparable to the finest condenser cardioid microphones. Plus they incorporate EV’s Continuously Variable-D design making them virtually free of the “proximity effect” when used close. True cardioid mics, they offer the greatest rejection at 180° off axis—directly to the rear of the microphone.

- Directional control is so effective that the frequency response is nearly independent of angular location of sound source, creating virtually no off-axis coloration yet providing greatest possible rejection of unwanted sounds.
- An integral blast and wind filter covers each acoustic opening on the mics. In the studio or on stage, singers can “close talk” the microphone, singing with their lips almost touching the grille screen with no worry of “P-pop,” breath sounds or excessive sibilance.
- Part of the filter also shock mounts the internal mic element, reducing vibrations. This, along with a rugged exterior steel casing allows them to withstand all the rigors of professional use.

- The RE20 has a “bass tilt down” switch, while the RE27N/D has two bass rolloff switches (sharp low-frequency cut at 200 Hz or a gentle rolloff) for situations where bass attenuation is required. A third switch is available for reducing the high-frequency treble boost.
- Physically identical, the RE27N/D steps up with a neodymium alloy magnet and a reinforced diaphragm dome to offer increased sensitivity (up to 6 dB more output), undistorted output at high SPLs and an extended high-frequency response. To further reduce noise, a highly effective hum-bucking coil is used to attenuate hum from lighting and other sources.

RE16 Dynamic Supercardioid Mic

The RE16 is designed for professionals who need an exceptional super-cardioid mic for ENG interviews, voice-overs and music production recording. It has an excellent, built-in heavy duty pop/blast filter, switchable bass roll-off, hum-bucking coil and a Memraflex grille screen that retains its shape if dropped.

- Utilizing the Variable-D design the RE16 features a directional characteristic independent of frequency. The result is a mic that generates little off-axis coloration while providing the greatest rejection of unwanted sounds.
- Transducer is a nearly solid mechanical structure that is highly resistant to damage from mechanical shock.
- Blast filter permits hand-held and out-door use without “P-popping” or excessive wind noise.
- Easily operated “bass-tilt” switch corrects spectrum balance for boom use and other longer reach situations.
- Humbuck coil and screw-machined steel outer casing provide 25 dB of hum rejection.
- Memraflex grille screen and carefully designed steel outer case provide additional protection. Finish is non-reflecting fawn beige micromatte.
ELECTRO-VOICE

RE SERIES

RE1000 Supercardioid Condenser Microphone
An condenser studio microphone, the RE1000 provides flat frequency response, low self-noise and an externally biased transducer. It is designed with rugged and reliable EV durability while providing excellent performance. Designed for high-quality recording and sound reinforcement, the combination of very low self-noise, excellent transient response and smooth frequency response makes the RE1000 an ideal choice for use in the most demanding of situations.

- Transducer is a short-D, high-efficiency unit, with the high output level of a large diaphragm and the tighter polar pattern and better transient response of a smaller diaphragm.
- The diaphragm itself is an ultra-thin, gold-laminate, environmentally stabilized, low-mass design.
- 12dB-per-octave low-frequency roll-off at 130 Hz
- The output electronics provide no voltage gain to ensure the lowest self-noise.
- Includes a hard-shell case for storage and transport.
- Internal two-stage pop filter reduces explosive breath blasts and wind noise.

RE200 Condenser Instrument Mic
The RE200 is a cardioid condenser instrument microphone designed for the exacting acoustic reproduction of choirs, strings, percussion and brass instruments in live performance and sound recordings. It is designed to be used in professional remote recordings, sound reinforcement systems, sound studios and motion picture/TV scoring stages. The RE200's frequency response has a continuous presence rise to enhance the sound quality. The excellent transient response and smooth frequency response is gently lifted above 1000 Hz, lending an open, transparent detail to the recorded sound.

- Ultra-thin, gold-laminated, and ultra-low mass diaphragm
- AcoustiDYM shock-mount system for mechanical isolation
- Runs on 12-52v DC phantom power
- Includes stand adapter and external foam windscreen
- Small, light and rugged, it can be used for variety of applications without being obtrusive.

RE510 Hand Held Condenser Microphone
The RE510 is a professional quality hand-held condenser microphone designed especially for vocalists. It features a 5/8” diameter capsule, advanced electronic design, and best of all, a sound that will enhance any vocal performance. The high frequency response provides just the right amount of definition and “air” without the stridency so common in other condenser vocal microphones. The wide bandwidth, high SPL handling capability, and low frequency selector switch of the RE510 also make it a versatile instrument microphone for most any application.

- 5/8” diameter self biased condenser capsule offers the warmth of a larger capsule design without sacrificing off-axis performance or transient response.
- Warm Grip handle for more comfortable feel.
- Low-frequency roll-off switch enables tailoring of low-frequency response
- Supercardioid polar pattern for superior feedback rejection and acoustic isolation.
- Multistage pop filter eliminates breath pop noises
- Modern high-speed electronic design for extremely low distortion, and outstanding transient response.
- High current differential output stage can drive long microphone cables without loss of performance.

ORDER & INFO. (212) 444-5088 • FAX: (212) 239-7770 (800) 947-7008
1-800-875-6951 • www.bhphotovideo.com
Using an EV RE90 Series architectural microphone is easy and enjoyable for everyone. The presenter will sound his or her natural best, without fear of feedback, cut-out, noise or distortion — or of sounding like a different person when switching microphones. These miniature electret condenser microphones are available in podium, hanging, lapel and boundary models. Fixed. Portable. Omnidirectional. Unidirectional. An EV family of microphones suitable for many applications and venues. Each with the same great sensitivity to sound pick-up and a remarkable clarity and consistency. Even when shifting from one RE90 to another — they have the same frequency response characteristics. No need to remix. It’s all in the family. But there is more. Streamlined, they blend seamlessly into the architecture. For easy installation and use, the power module is integrated within each microphone — no need to install a separate unit. Yet, the lapel mic is smaller, the hanging mics more shapely, the podium mics more slender, and the boundary mics lower in profile, than others on the market.

**RE90P-12/RE90P-18**

**Unidirectional Podium Microphone**

Acoustically designed for high-quality sound reinforcement and public address applications, this slim-profile podium microphone picks up and reproduces sound naturally for either distant or close-up delivery. The gooseneck, 12” (RE90P-12) or 18” (RE90P-18), can be precisely positioned without excessive twisting and turning. Small in diameter, it has two supple joints and a rigid center tube. The electronics module is housed in the gooseneck base, which makes installation and service quick and easy. The RE90P mounts to a lectern, pulpit, or podium equipped with the proper receptacle. Or install with the optional flange-mount and shock-mount kits. Unobtrusive, however it is used.

- Small, streamlined appearance
- Quick-connect to female XLR-type, 3-pin receptacle
- Permanent installation with optional FMK flange-mount kit and CPSM shock-mount kit
- Choice of 12” or 18” gooseneck
- Microphone can be exactly positioned without unsightly twisting and turning
- Uniform cardioid polar pattern
- Steel construction reduces noise from magnetic field and RFI

**RE90H/RE90HW**

**Unidirectional Hanging Microphone**

Ideal for choir, instrumental and vocal groups, and live theatre, this hanging microphone is so sensitive it catches the smallest sigh, the softest note. So faithful to the performance so natural in delivery, everyone in the audience can hear every word, experience every nuance. It’s ideally suited for distant sound pick-up, with a precisely controlled polar response designed to suppress feedback without coloring the sound. The RE90H/RE90HW features an exclusive braided, shielded cable which prevents the microphone from rotating, keeping it firmly in place, even with wide swings in temperature or humidity. There’s no need for awkward “fish-line” tethering.

- Non-reflecting black (RE90H) or low-gloss white (RE90HW) with matching cable
- Shielded pre-amp is highly-resistant to electrical noise and radio frequency interference
- High gain electronics for added reach
- 25’ braided, shielded cable maintains microphone’s position (no rotation)
- Cardioid polar pattern
- Three-pin male XLR-type output connector
RE90B/RE90BW
Boundary Microphone

With the lowest profile of any boundary microphone, the RE90B/RE90BW is one of the smallest available. Unidirectional, it picks up every word and delivers it fully and naturally, without the distraction of ambient noise.

The RE90B is specifically designed for surface-mounted applications such as distance learning centers, video- or teleconferencing systems, classrooms, and houses of worship. It can be placed on a surface for temporary use, routing its miniature cable from the rear where it’s barely visible. Or installed permanently, with the hidden cable routed through a hole in the surface.

The mic is equipped with internal padding, printed circuit board, fiber washers for the mounting screws, and a rubber, non-slip pad covering the entire base. These elements combine to give you the advantage of extremely low surface-to-microphone vibration. And built-in equalization provides a fuller, more natural sound than other typical boundary microphones.

- Non-reflecting black (RE90B) or low gloss white (RE90BW)
- Heavy-duty zinc die-cast body and strong, perforated steel screen
- Low profile • Half-cardioid polar response promotes excellent gain

RE90L
Ultra Miniature
Omnidirectional Lapel Microphone

Hearing is believing (you have to look closely to see it). Ultraminiature and ultra lightweight, anyone wearing the RE90L can easily forget he or she is wired. Designed for sound reinforcement in applications such as houses of worship, schools and business presentations, this smallest, lightest of all microphones on the market, has the highest quality sound characteristics. It is well-balanced throughout its full range. Omnidirectional output is uniform and natural, no matter where the microphone is placed. The compact electronics housing is made of a high-strength polycarbonate that is very lightweight but very durable. A side clip attaches the unit to belt, waistband or pocket.

- Ultraminiature and lightweight (the smallest available).
- Omnidirectional • Tiny but sturdy 6´ shielded cable
- Alligator and tie-tac clips included
- Lightweight, clip-on electronics pack

All-in-One Podium Microphone

The first podium microphone with four polar patterns, the PolarChoice gives you unprecedented performance and flexibility. It's like four microphones in one! PolarChoice offers the option of four different pickup patterns, allowing the selection of the best pattern for the application. The ability to conveniently select from omnidirectional, cardioid, supercardioid or hypercardioid assures the maximum protection against system feedback and ambient background noise. No need to inventory single-pattern microphones or expensive interchangeable heads. Just select the pattern that fits your needs with a convenient and easy turn of a rotary switch.

PolarChoice microphones feature EV's exclusive dual-mounted condenser transducer and sophisticated electronics to ensure that regardless of the pattern selected, the response will remain smooth, accurate and uniform. The use of EV's patented triple-layer Acoustifoam windscreen minimizes the level of annoying "P pops" commonly associated with other podium microphones.

Whether your requirement is for houses of worship, hotels, meeting rooms, or other multipurpose facilities where exceptional sound quality and unmatched flexibility are critical, the first choice is PolarChoice.
Cardioid Vacuum Tube Studio Microphone

Introduced three years ago, the M 147 Tube is an affordable top-of-the-line studio cardioid microphone designed for project, home, and professional recording studios. At the heart of the M 147 is the K 47 capsule—made famous over 50 years ago in the legendary U 47 microphone and then later by the U 47 FET. Employing the K 47 pressure-gradient capsule ensures that the M 147 delivers the same warmth and clarity produced by its legendary predecessors. Exceeding traditional designs, Neumann uses a modern tube complemented by a transformerless output circuit. This innovative combination of current tube technology with the most advanced solid-state circuitry results in a more controlled, uncolored audio signal from capsule to output. Bass response extends quite low while avoiding phase problems or low level signal losses typical of transformers. Similar to all Neumann mics, the response characteristics are achieved acoustically. The mic also maintains excellent impulse response and faithfully reproduces transient signals found in music and speech. The M 147 has a fixed cardioid pattern that becomes more directional as frequency increases—giving the microphone more of a supercardioid pattern in the high frequency range. The M 147 also features extremely low self noise for a tube microphone (12 dB-A) and handles high pressure acoustic signals up to 134 dB SPL without distortion. An excellent microphone for acoustic guitar or bass, horns, instrument amps, and any kind of vocals, the M 147 like all Neumann tube mics, comes with an elegant satin nickel finish.

FEATURES

- **Polar Pattern**
  - The M 147 has a cardioid characteristic, leaning more toward super-cardioid due to its distinctive capsule design. At higher frequencies the pattern becomes more directional. This is very similar to the U 47 and U 47 FET.

- **Acoustic Features**
  - The M 147 is addressed from the side where the body has the diamond-shaped Neumann logo. The black color identifies tube mics.
  - The K 47 capsule (equivalent to the one in the U 47) is the deciding factor in determining the sound characteristic. The M 147 is flat from 60Hz to 2 kHz. It has a small, wide 1 dB peak from 3 to 5 kHz, and a 2 dB peak at about 10 kHz.
  - Reproduces extremely low frequency signals without distortion.
  - Headgrille design protects the capsule effectively against popping and wind noise.
  - Capsule and the entire circuitry are shock mounted to prevent structure-borne noise.

- **Common Applications**
  - Use as announcer’s mic for broadcasting and voice overs or as a vocalist mic where its warm and yet transparent sound gives volume and presence. Use as a spot mic for close miking of solo instruments especially strings, wind instruments, and piano.

- **Electronics**
  - Compared to other tube mics the M 147 is distinguished by its extremely low self-noise level of only 12 dB-A / 24 dB CCIR weighted.
  - Combines a specifically selected vacuum tube (triode) with modern circuitry. This technique takes full advantage of the special transfer characteristics of the tube and passes the processed audio signal of the capsule to the microphone output, without any coloration or unwanted side effects.
  - The tube amplifies the capsule’s signal by approximately 10 dB, thus preventing any possible influences from subsequent electronics. The M 147 delivers a high output voltage, and can feed mic cables up to 300m without signal degradation.

- **N 149 A Power Supply**
  - To maintain optimum anode current and heater voltage for the tube regardless of cable length, a built-in sensor lead monitors voltage levels. If it detects any voltage drop at the heater, the N 149 A power supply compensates for the difference. The N 149 A also employs a slow start-up to maximize the life of the tube.

- **Supplied Accessories**
  - Includes N 149 A universal AC power supply (100-240v, 50-60 Hz) and 30-ft. cable, SG-1 metal swivel stand adapter, and attractive aluminum case.

- **Optional Accessories**
  - To reject unwanted low-frequency interference from structure-borne or wind noise the invincible EA 1 elastic suspension and the WS 87 windscreen are available as optional accessories.
  - For close miking of vocals the optional PS 30 pop screen is also available.
Multi-Pattern Tube Studio Microphone

Like the M 147 Tube, the M 149 Tube is the perfect combination of vintage sound and modern technology. A transformerless tube microphone optimized to have the sound "character" of the classic U 47 and the multi-pattern capability of the M 49 microphones, the M 149 gives you the unmistakable tube warmth that audiences love, while at the same time delivering the clarity and precision of a modern capsule. The ideal choice for a wide range of recording situations, the M 149 has nine polar patterns to choose from as well as a seven-position high-pass filter.

**Polar Patterns**
- Easily switch between 9 directional patterns: Omnidirectional, wide-angle-cardioid, cardioid, hypercardioid, figure-8, and one additional intermediate pattern between each major position.

**Acoustic Features**
- The M 149 is addressed from the front, marked with the Neumann logo.
- Large headgrille surrounds the capsule. Acoustically very open, it therefore increases the sonic realism. In addition, the wedge-shaped grille reduces internal reflections.
- The M 149 is distinguished by its extremely low self-noise level of only 13 dB-A / 28 dB CCIR weighted (in cardioid).

**Filter**
- Seven-position slide switch on the back of the mic selects a high-pass filter, advancing in half-octave steps between 20 Hz and 160 Hz (-3dB). This filter suppresses rumble from air-conditioning and is an effective tool to control proximity effect when the mic is used up close.

**Applications**
- With nine polar patterns to choose from, this mic is ideal for a wide range of recording situations. As its ancestors, the M 149 Tube is superb as a vocalist microphone, for piano, strings and orchestral recording.

**Supplied Accessories**
- Includes N 149 universal AC power supply (100-240v, 50-60 Hz), EA 170 elastic suspension, dust cover, and a wooden box for protecting and storing the mic safely.

**75 Years of Microphone Greatness**

It all began in 1928, when George Neumann split with Eugen Reiz, with whom he had collaborated to design the historic "Reisz Microphone", and founded his own firm, George Neumann & Co., in Berlin, Germany. That year saw the company's first product, and what is now recognized as the first commercial condenser microphone: the CMV3. With its omni capsule (and later with directional capsules) and innovated tube amplifier, this groundbreaking mic is known as the "Neumann Bottle" and is still today sought after for its sound.

In the late 1940s, Neumann began the period in which it would become known the world over for making the benchmark recording studio mic. The long reign of the ribbon microphone came to an end with the widespread acceptance of Neumann's U 47, introduced in 1949. This mic was the first with variable polar patterns (omni and cardioid) and has remained one of the most famous microphones ever produced. In fact, the majority of the Beatles vocals were recorded with the U 47.

Other legends from Neumann's great history include the M 49 and its omni relative, the M 50, both introduced in the early 1950s. Like the U 47, the M 49 used the M 7 capsule, while the M 50 used a unique pressure transducer with a pure metal membrane. Practically all "Decca Tree" orchestra recordings from the 1950s to the present rely on the M 50 or its new version, the M 150 Tube, for their unique polar and frequency response.

Neumann's small diaphragm mics have earned their keep in innumerable studios for their clear sound, excellent off-axis characteristics, and tremendous value. The KM 54, introduced as a small microphone for television and broadcast use in the mid 1950s, remains in service today as a premier mic for acoustic instruments. The KM 84, introduced in 1966 as the first phantom 48V powered condenser mic, was an enormously popular mic right up through its discontinuation in 1988 and is already considered a "classic". Today, scarcely a studio would consider itself serious without at least one Neumann mic on hand, often the U 87, which was introduced in its original form in 1967. The current product line, including such microphones as the M 149 Tube, TLM 103, KM 5 105 and KM 184, pays homage to the company's rich history while pushing the limits of what is possible in microphone design and application.
Since the 1950s, the Neumann M 50 has been heralded as the ideal microphone for orchestral recording and string scoring. With its phenomenal transient response and unique directional characteristic, this classic mic has endeared many fans, both in the control room and on the soundstage. Now using modern materials and technology Neumann has recreated the beauty of the vintage M 50.

The M 150 Tube delivers the same unique omni-directional characteristics—however, that's where the similarity ends. With low self-noise, a Titanium membrane and capsule, transformerless tube amplifier and sophisticated power supply, the M 150 Tube is not a re-issue but an entirely new microphone in its own right. Destined to join the ranks of Neumann’s classic microphones, the M 150 Tube is also excellent for full-bodied vocals and ensemble stereo recording. Ideal for any stereo, 5.1 or 7.1 surround recording, particularly DECCA Tree technique.

◆ Much lauded for its desirable mechanical characteristics, titanium was, until recently, difficult to machine as well as to obtain the quality necessary for use in microphones. Now with the necessary materials at hand, Neumann is using this lightweight element for the M 150’s thin, 12mm capsule to deliver low self noise, a smooth extended frequency response, and unprecedented transient response.

◆ The headgrill is formed just like the original M 50, and the capsule mounting employs the same 40mm sphere that rendered the M 50’s famous pick-up pattern: circular at low frequencies and increasingly narrow up the spectrum. This means, at the lowest frequencies, the system is a pure omni pressure transducer with a perfectly circular polar pattern. But in the mid- and upper frequencies, pickup becomes more narrow.

◆ Wide 119 dB dynamic range allows reproduction of the full musical expression, without restraint. Self noise is low, only 15 dB-A so more gain can be used without risk of adding noise to the final product.

◆ The transformerless output circuit of this microphone allows for extremely fine reproduction of small signals and low frequency information. Also, long cable runs can be used with no loss of signal quality.

**“Decca Tree” Recording**

The specialized Decca Tree configuration is characterized by having three omnidirectional microphones in a “T” shaped setup. Two of the microphones are positioned about two meters apart. The third microphone is positioned between the first two, but about 1.5 meters forward (closer to the source) of them. This configuration is often used for orchestral recordings and film scoring due to its natural sound with good separation. It is useful in film because the image doesn’t usually cause problems with Dolby or other surround processes. In most cases a trio of Neumann M 50 microphones (or now, the new M 150 Tube) are used due to their unique directional and frequency response characteristics and smooth sound.

**FEATURES**

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<thead>
<tr>
<th>Microphone Type</th>
<th>M 147</th>
<th>M 149</th>
<th>M 150</th>
</tr>
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<tbody>
<tr>
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* Omnidirectional/cardiod/figure-8

Includes N 149V Vintage AC power supply (100-240v, 50-60 Hz), EA 170 elastic suspension and attractive aluminum case.

**For Any Inquiries Regarding Your Order, Call Our Customer Service:**
(800) 221-5743 • (212) 239-7765 • FAX: (800) 947-2215 • (212) 239-7549
Large Diaphragm Microphone

With a universal cardioid pattern, straightforward handling, extremely low self-noise level, and an affordable price, the large diaphragm TLM 103 is designed for applications that require the utmost in sound quality— but on a limited budget. Utilizing the tried and true transformerless circuit found in numerous Neumann microphones, the TLM 103 achieves incredibly low self-noise and the highest sound pressure level transmission. The K 103 capsule, derived from the used in the U 87, has a cardioid pattern, is acoustically well-balanced and provides extraordinary attenuation of signals from the rear. The TLM 103 is available in satin nickel and matte black. Includes an SG 1 metal swivel mount and a wooden jeweler's box.

Polar Pattern

- Equipped with a large diaphragm capsule with cardioid pattern. By focusing on this pattern – used in most recording situations – the attenuation of unwanted rear sound is optimized. Off-axis sounds are rendered naturally while isolation is increased. This also leads to a high feedback suppression when the mic is used in live situations or where loud-speaker playback is a factor.

Electronics

- Just 7 dB-A / 17.5 dB CCIR self-noise level allows even the smallest signals to be reproduced noise-free. And with SPL capability up to 138 dB without distortion, the TLM 103 provides a dynamic range of 131 dB.

Acoustic Features

- The TLM 103 is addressed from the front, marked with the red Neumann logo on the microphone body. The K 103 large diaphragm capsule is based on the K 87, well known from the U 87 microphones.
- The capsule has a flat frequency response up to about 5 kHz, and above that, a wide flat 4 dB presence boost.
- The large wire mesh headgrille protects the capsule from plosive sounds and effectively prevents pop noises. These characteristics are achieved without resorting to corrective resonance effects. Therefore, the microphone maintains an excellent impulse response and reproduces the finest details of music and speech without coloration.

Applications

- Use as announcer's mic for broadcasting and voice overs or as a vocalist mic. With minimal self-noise, the TLM-103 is ideal as on-air mic for radio/broadcast, sampling, foley/sound effect. Use as a spot mic for wind instruments, strings, percussion, pianos, guitar amps and drum overheads.

Optional Accessories

- EA 1 elastic suspension and WS 87 wind-screen for rejection of unwanted low-frequency interference from structural or windborne noise. The optional PS 30 pop screen is for close miking of vocals.

TLM 170 R

Multi-Pattern Large Diaphragm Microphone

Introduced 20 years ago, the TLM 170 R is a large diaphragm condenser mic with multiple polar patterns, as well as the first Neumann microphone to use FET 100 technology. Its sound has a very transparent characteristic, in contrast to other Neumann microphones that have a distinct personality. Therefore it can be used for many diverse applications in professional recording studios, in broadcasting, film and television, and for semiprofessional productions. Along with a balanced, transformerless output stage it features extremely low self-noise and an impressive dynamic range. Five directional characteristics are selectable by means of a rotary switch. In the sixth position, marked “R”, the directional patterns can be remote controlled with the optional N 48 R-2 power supply. There is no special cable necessary for this purpose. The microphone has at its rear a 10dB attenuation switch for extremely high sound pressure levels, and a high-pass filter to suppress structure born noise.
The TLM 170 R offers five polar patterns: omnidirectional, cardioid, hypercardioid, wide-angle cardioid, and figure-8. Compared to the standard cardioid pattern, the hypercardioid characteristic suppresses sound from the side more efficiently. The wide-angle polar pattern is especially useful to record large sound sources.

**Applications**
- For universal use, very transparent without coloration. Ideal announcer’s mic for broadcasting, dubbing, voice-overs. For close miking of high SPL instruments such as kick drums and guitar amps, or as a spot mic for wind instruments, strings, and pianos.
- Optional remote control of polar patterns, allows the mic to be placed anywhere, even suspended from the ceiling.

**Acoustic Features**
- The mic is addressed from the front, marked with the Neumann logo. The large diaphragm capsule inside the headgrille has a very smooth frequency response for all polar patterns over a wide acceptance angle.
- The curves are flat and parallel to the 0° frequency curve up to 10 kHz within an angle of ± 100°. The result is a very even diffuse-field response for all polar patterns.
- This ensures that even in reverberant environments as more reflections arrive at the mic from different directions, the mic maintains an excellent impulse response and reproduces all transient phenomena of music and speech without any coloration.
- Low self-noise level of 14 dB A / 26 dB CCIR weighted. SPL capability up to 144 dB without distortion, dynamic range of 130 dB.

**Polar Patterns**
- The TLM 170 R offers five polar patterns: omnidirectional, cardioid, hypercardioid, wide-angle cardioid, and figure-8.
- Optional remote control of polar patterns, allows the mic to be placed anywhere, even suspended from the ceiling.

**Side Bracket**
- The TLM 170 R has a tilting side bracket to attach the mic to booms or stands. The bracket is equipped with rubber elements to protect the mic from mechanical shock. If necessary, it can be mounted on the other side of the microphone as well.

**Optional Remote Control**
- The N 48 R-2 provides remote control of the mic’s polar patterns by varying the phantom voltage. The range is ± 3V of the nominal 48V value.

**Filter and Attenuation**
- A 10 dB attenuation switch prevents the input from being overloaded. A second switch at the rear lets you attenuate the frequency response below 100 Hz to suppress undesired structure-borne noise.

**The U 87 Ai, “The Standard”**

Since the late 1960s, the Neumann U 87 has been the standard by which all other studio microphones have been measured. Not only is it a legendary audio product, but in recent years, it has also become the most imitated mic in the world. This microphone got its start as a solid-state version of the older U 67, which was a tube mic. The U 67 was introduced in 1960 as a more modern, versatile, and capable microphone than the venerable U 47. In comparison to the U 47, the U 67 had three polar patterns (instead of two), a -14dB pad switch for louder sound sources, and a high-pass filter to reduce low frequency sounds.

The capsule developed for the U 67 was a radical design and a departure from anything that had come before. During the process of creating this capsule, more than 40 prototypes were tested with broadcast and recording engineers throughout the world. The result was the K67, which as survived today in the thoroughly modern U 87 Ai studio microphone. This capsule, when compared to previous designs, exhibits very linear off-axis pickup (especially for such a large capsule), excellent transient response and a very even response across all polar patterns. In terms of sound quality, the K67 capsule provides a sublime capture of anything placed before it.

Over the last three decades, the U 87 has only undergone one significant change: from the original U 87 to the newer U 87 Ai. This change took place in 1986, and involved mostly the re-design of the audio and powering circuits. The addition of a DC-DC converter allows the modern U 87 Ai to operate at a very high level of sensitivity but with exceptionally low self noise.

Today, if you run a professional recording studio, the U 87 Ai should be a part of your collection. Since there are more of these mics throughout the world, and their legendary performance is well known by artists and engineers alike, clients looking to book your rooms will expect this microphone to be available. Whether you are recording strings, vocals, drums or piano, this is one microphone you simply can not do without.
Multi-Pattern Large Diaphragm Studio Microphone

The U 87 Ai is the best known and most widely used Neumann studio microphone. It is equipped with a large dual-diaphragm capsule with three directional patterns (cardioid, omnidirectional and figure-8) and a unique frequency and transient response characteristic. Users recognize the microphone immediately by its distinctive design. The U87 Ai is ideal for most general purpose applications in studios, for broadcasting, film and television. It is used as a main microphone for orchestra recordings, as a spot mic for single instruments, and extensively as a vocal mic for all types of music and speech. Patterns are selectable with a switch below the headgrille. A 10dB pad enables the mic to handle sound pressure levels up to 127 dB without distortion. Low frequency response can be reduced to compensate for proximity effect. Available in black or nickel finish, standalone or in packaged with popular accessories for stand mounting.

Polar Patterns
- The dual-diaphragm capsule is elastically mounted and protected by a large headgrille. A switch below the grille selects the three patterns: omnidirectional, cardioid and figure-8. A window above the switch shows the symbol of the selected pattern.
- The cardioid characteristic maintains a smooth frequency response at a distance of 30 to 40 cm, the figure-8 characteristic even at a distance of 15 to 20 cm.

Acoustic Features
- The U 87 Ai is addressed from the front, marked with the Neumann logo. The frequency response of the cardioid and figure-8 directional characteristics are very flat for frontal sound incidence, even in the upper frequency range. The mic can be used very close to a sound source without the sound becoming unnaturally harsh.
- High-pass filter practically eliminates interference from subsonic and low frequencies.
- SPL capability of 117 dB without distortion and self-noise of 12dB-A gives the mic an overall dynamic range of 105 dB.
- Switchable -10 dB pre-attenuation pad lets the mic handle up to 127dBL SPL without distortion.
- Low-frequency roll-off filter lets you change the mic's cutoff frequency thus reducing low frequency interference directly at the input of the mic amplifier. Also compensates for proximity effect.

Applications
- For universal use
- The classical studio mic for vocalists (soloists & background vocalists)
- Announcer's mic for broadcasting, dubbing, voice-over; as overhead mic
- Spot mic for wind instruments, strings (especially cello & double bass), piano, and percussion

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>TLM 103</th>
<th>TLM 170R</th>
<th>U 87 Ai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>O, C, H</td>
<td>O, C, Q, B</td>
<td>O, C, B</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>20 Hz - 20 kHz</td>
<td>20 Hz - 20 kHz</td>
<td>20 Hz - 20 kHz</td>
</tr>
<tr>
<td>Sensitivity @ 1 kHz into 1 kohm</td>
<td>21 mV/Pa</td>
<td>8 mV/Pa</td>
<td>20/28/22 mV/Pa*</td>
</tr>
<tr>
<td>Rated impedance</td>
<td>50 Ω</td>
<td>50 Ω</td>
<td>200 Ω</td>
</tr>
<tr>
<td>Rated load impedance</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
</tr>
<tr>
<td>Equivalent SPL CCIR 468-3</td>
<td>17.5 dB</td>
<td>26 dB</td>
<td>26/23/25 dB*</td>
</tr>
<tr>
<td>Equivalent SPL DIN/IEC 651</td>
<td>7dB-A</td>
<td>14 dB-A</td>
<td>15/12/14 dB-A*</td>
</tr>
<tr>
<td>S/N ratio CCIR 468-3</td>
<td>76.5 dB</td>
<td>68 dB</td>
<td>68/71/69 dB*</td>
</tr>
<tr>
<td>S/N ratio DIN/IEC 651</td>
<td>87 dB</td>
<td>80 dB</td>
<td>79/82/80 dB*</td>
</tr>
<tr>
<td>Maximum SPL THD &lt; 0.5 %</td>
<td>138 dB</td>
<td>144 dB</td>
<td>117 dB (cardioid)</td>
</tr>
<tr>
<td>Maximum SPL THD with pre-attenuation</td>
<td>154 dB</td>
<td>127 dB</td>
<td></td>
</tr>
<tr>
<td>Dynamic range of the Mic Amp DIN/IEC 651</td>
<td>131 dB</td>
<td>130 dB</td>
<td>105 dB</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>48 V ± 4 V</td>
<td>48 V ± 4 V</td>
<td>48 V ± 4 V</td>
</tr>
<tr>
<td>Current Consumption</td>
<td>3 mA</td>
<td>3 mA</td>
<td>0.8 mA</td>
</tr>
<tr>
<td>Matching Connector</td>
<td>XLR 3F</td>
<td>XLR 3F</td>
<td>XLR 3F</td>
</tr>
<tr>
<td>Diameter</td>
<td>5.2 x 2.4”</td>
<td>6 x 2.4”</td>
<td>7.9 x 2.2”</td>
</tr>
<tr>
<td>Weight</td>
<td>17.6 oz</td>
<td>22 oz</td>
<td>17.6 oz</td>
</tr>
</tbody>
</table>

* Omni-directional / cardioid / figure-8
Digital Microphone System

Setting new standards in microphone applications and recording techniques, Neumann’s Solution-D digital microphone closes the final gap in the all-digital signal path. By transferring the dynamic range and fidelity of the best analog studio microphones into the digital domain, one of the last parts of the audio chain— the microphone— has become part of the digital revolution. Thanks to a revolutionary new A/D conversion process, a specially developed synchronization method, and remote control of typical microphone parameters and mixing console functions, Solution-D satisfies even the highest demands of professional audio production. It consists of three components: the Digital Microphone D-01, the Digital Microphone Interface DMI-2, and the software (RCS) that permits operation and remote control of the microphone. Solution-D also introduces a new AES standard. AES 42-2001 identifies the transmission of output signals, power supply for the microphones, and remote control of all typical microphone functions and parameters.

The wide variety of Solution-D features permits small productions in excellent quality with just a microphone and a recording device. Every sound designer who is familiar with digital recording technology, can begin using Solution-D immediately without a learning curve. As with analog microphones, the same acoustic principles and recording techniques apply. However, the additional features of digital microphones open up new possibilities during production.

**Features**

**Integrated Digital Audio Signal Processing**

Neumann developed a completely new A/D converter specifically for the signal levels directly after the mic capsule. Necessary gain adjustments can be performed inside the mic in the digital domain. This eliminates traditional peripherals devices such as preamplifier and A/D converter, as well as reduces costs. The front-end conversion of the analog signal provides a marked improvement in dynamic range. This is noticeable throughout the entire signal chain and makes level adjustments less critical. Other signal processing functions, such as mute and phase reverse, which are usually inside a mixing console, are integrated into the mic. Other possibilities include the use of remote commands, such as an LED to indicate Red Light (“On Air”). Features include the transient limiter, which for the first time can be applied at the most efficient point, that is, at the signal source. This can reduce damaging transients that are very short, however exhibit a large amplitude. Analog microphones require extremely large headroom in the following signal path to accommodate such signals. Additional features will include a noise gate function and switchable test signals inside the microphone.

**D-01 Digital Microphone**

At first glance, the D-01 mic looks no different than its analog counterparts. Right behind the mic capsule, however, is an A/D converter developed by Neumann and optimized for the signal level of the microphone capsule. The signal sent by the microphone capsule is converted directly into a digital signal. The result is an internal digital 28-bit signal with a dynamic range of more than 130 dB (A-weighted, including microphone capsule). The digital signal will be processed by the help of an FPGA (Field Programmable Gate Array) built right into the microphone. This means that parameters such as polar pattern, pre-attenuation, low-cut, pre-amplification and various switching functions can be realized digitally and remote controlled. This eliminates previously required devices such as analog pre-amps and A/D converters. For positive self-identification, the microphone transmits information such as manufacturer name, type, serial number, and implemented software level to the connected receiver.

The microphone is equipped with a 3-pin XLR connector via which the supply voltage, phantom power, and remote control data stream are transmitted. The signal components for a control loop as required for synchronous transmission are also contained in this data protocol. The output signal of the microphone conforms to the AES 42-2001 format.
DMI-2 Digital Microphone Interface

The Solution-D microphone connects directly to any equipment that supports the new AES 42-2001 Standard. In all other situations, the Neumann DMI-2 Digital Microphone Interface is necessary. This separate, two-channel device converts the AES 42-2001 data format of the microphone into an AES/EBU signal. The system will be operated by the Neumann remote control software with a computer connected to the DMI-2 interface via a USB connection. If a large number of microphones are used, it is possible to cascade multiple DMI-2’s and still provide each interface with an individual address. Besides word-clock input and output, the unit also has an integral master word clock generator that, in the future, will support sample rates of up to 192 kHz. If there is no word clock at the input, then the internal master is used automatically to synchronize both microphone channels and is switched to the word-clock output. External commands— for example, a red “On Air” light— can be controlled via the 9-pin port.

RCS Remote Control Software

The Solution-D is controlled by Remote Control Software, which would ideally be part of a recording system, but can also run on a standalone desktop or laptop computer. All important parameters are shown on the screen and can be changed at any time. During production, the recording engineer has complete control over the status and parameters of all mic’s and can change settings quickly and conveniently if necessary. The parameters include polar pattern, pre-attenuation, low-cut, pre-amplification, various indicators of microphone status, command indicators, mute and phase reverse functions. It is also possible to follow signal levels on the screen. The information is transmitted by the mic, (manufacturer name, type, serial number, etc.) is displayed and used for positive self-identification of the microphone connected. In addition, it is possible to add self-written notes. For example, the name of the sound source and positioning of the microphone. Of course, it is also possible to store and retrieve the setup for the entire recording session.

### Specifications

<table>
<thead>
<tr>
<th>DMI-2 SPECIFICATIONS</th>
<th>D-01 SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inputs</strong></td>
<td>XLR 3 F, AES 42-2001 data format: transmission of audio and status data from the microphone, phantom powering and remote control data to the microphone</td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>XLR 3 M, AES/EBU data format, switchable between one and two channel operation. Configuration via Remote Control Software RCS</td>
</tr>
<tr>
<td><strong>Phantom Power</strong></td>
<td>+10 V, max. 250 mA per channel, short circuit protected</td>
</tr>
<tr>
<td><strong>Remote Control Data</strong></td>
<td>2 RJ45 jacks, connecting with included Neumann interface to USB-Port (Windows 2000, Win 98SE, Win ME), cascading of up to 16 DMI-units (2 or 8 channel) possible</td>
</tr>
<tr>
<td><strong>Device Address</strong></td>
<td>Selectable via coding switch on the rear side</td>
</tr>
<tr>
<td><strong>Aux User Port</strong></td>
<td>750 Bits pulses overlaid on the phantom power</td>
</tr>
<tr>
<td><strong>Synchronization</strong></td>
<td>AES 42 - Mode 2, clock control via PLL (Default setting). Without external word clock master, the internal master is used for synchronization of both microphone channels. AES 42 - Mode 1, clock free running at center frequency, necessitates Sample Rate Converter (SRC) on receiver side. Reduction of dynamic range depending on the quality of the SRC</td>
</tr>
<tr>
<td><strong>Word Clock Input</strong></td>
<td>BNC, 75 Ohm</td>
</tr>
<tr>
<td><strong>Word Clock Output</strong></td>
<td>BNC, 75 Ohm, set automatically to internal word clock master when no signal is present on word clock input.</td>
</tr>
<tr>
<td><strong>Internal Word Clock Generator</strong></td>
<td>Selectable sampling rates: 48 kHz, 96 kHz, 192 kHz, 44.1 kHz, 88.2 kHz, 176.4 kHz</td>
</tr>
<tr>
<td><strong>Indications</strong></td>
<td>Data Valid (AES 42) and Sync Locked (Mode 2) per channel, Power On and Ext.Word Clock</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>100-240 V, 50/60 Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DMI-2 SPECIFICATIONS</th>
<th>D-01 SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acoustical Transducer</strong></td>
<td>Double diaphragm capsule K 07; Large diaphragm, diameter 30 mm with protected internal electrodes</td>
</tr>
<tr>
<td><strong>Sensitivity at 1 kHz, 0 dB gain</strong></td>
<td>12 mV/Pa</td>
</tr>
<tr>
<td><strong>Equivalent SPL DIN/IEC 651</strong></td>
<td>7 dB-A</td>
</tr>
<tr>
<td><strong>S/N ratio DIN/IEC 651</strong></td>
<td>87 dB</td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>AES 42-2001</td>
</tr>
<tr>
<td><strong>Dynamic Range</strong></td>
<td>130 dB (complete system incl. capsule)</td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>140 dB (ADC input shorted)</td>
</tr>
<tr>
<td><strong>Internal Resolution</strong></td>
<td>28 Bit</td>
</tr>
<tr>
<td><strong>Sampling rates</strong></td>
<td>48 kHz / 96 kHz, alternatively 44.1 kHz / 88.2 kHz</td>
</tr>
<tr>
<td><strong>Remote</strong></td>
<td>Polar pattern: 15 patterns, omni - cardioid-figure-8</td>
</tr>
<tr>
<td><strong>Controlable</strong></td>
<td>Low Cut: Flat/40 Hz/80 Hz/160 Hz</td>
</tr>
<tr>
<td><strong>Functions</strong></td>
<td>Pre-attenuation: 0 dB, - 6 dB, -12 dB, - 18 dB</td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>0-63 dB in 1 dB steps, clickless</td>
</tr>
<tr>
<td><strong>Switch functions</strong></td>
<td>Soft muting, phase reverse, signal light (further functions in preparation)</td>
</tr>
<tr>
<td><strong>Synchronization</strong></td>
<td>AES 42 - Mode 2 (default) and AES 42 - Mode 1 (see DMI)</td>
</tr>
<tr>
<td><strong>Signals</strong></td>
<td>Blue and red LED (switchable via control software and Aux User Port)</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>XLR 3 M, AES 42-2001 data format: transmission of audio and status data from the microphone, phantom powering and remote control data to the microphone</td>
</tr>
<tr>
<td><strong>Parametric transient limiter</strong></td>
<td>approx. 700 g</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>63.5 x 185mm (DxL)</td>
</tr>
</tbody>
</table>
NEUMANN

KMS 105

Vocal Microphone

Designed with superlative vocal reproduction in mind, the KMS 105 brings Neumann quality to the demanding sound reinforcement environment. With its supercardioid polar pattern, low self noise and uncolored off-axis pickup, the KMS 105 complements in-ear monitor systems. By employing a unique 4-layer acoustic filter, the KMS 105 minimizes popping and wind noise, and with special mechanical and electrical filters, handling noise is virtually eliminated. Because of the superior resolution and linear frequency response, it is very easy for the artist using the KMS 105 to identify whether he or she is “on mic”.

FEATURES

Highest Quality Vocals

- Compared to other handheld vocal mics, the KMS 105 offers a superior resolution of the voice, with extended frequency response and accurate transient detail. Sibilance problems common to other handheld condenser mics are eliminated.
- The K 105 capsule features a supercardioid pattern, achieved by specially modifying the response of the pressure gradient transducer. The frequency response characteristic developed in the acoustic realm, allows for accurate representation of transient details found in music and speech, thus transmitting a very “open” and detailed capture of the human voice.
- Due to the tight supercardioid polar pattern and the coloration-free off axis response, a very high level of gain before feedback is achieved. This polar pattern offers the highest degree of isolation while still allowing for a generous “sweet spot” in front of the microphone.
- The KMS 105 has a dynamic range of 132 dB, allowing reproduction of the artist’s full expression, without restraint. Maximum SPL is 150 dB, and with low self noise (18 dB-A) greater gain can be used without risk of adding noise to the mix. This way, the artist is able to use the microphone at a greater distance therefore maintaining a wide range of creative freedom during the performance.
- And by employing a transformerless output circuit, this microphone can incorporate long cable runs with no loss of signal quality or high-frequency response.

The Microphone Basket

Most vocal mics rely on the attenuating effects of foam layers inside the basket. Although this is certainly a cost-effective procedure, the detrimental effects of this foam layer can be shown quite easily. Treble frequencies are attenuated, and furthermore the polar pattern can be deformed.
- No foam is used in the basket, thus eliminating any “clouding” or “muffling” of the sound. Also, by using a DC-polarized studio condenser capsule, all the nuances of the voice come through with subtlety, power and focus.
- These drawbacks can be eliminated by selecting open mesh constructions. With careful dimensioning and selection of different mesh sizes, excellent pop and wind attenuation can be delivered, as is well known from the standard studio-use pop screen PS30, made of two layers of spaced fabric.
- Naturally, the outer microphone basket is hardened steel, due to the required ruggedness for on-stage use.

<table>
<thead>
<tr>
<th>Element Type</th>
<th>KMS 105</th>
<th>KMS 140</th>
<th>KMS 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Principle</td>
<td>DC-biased Condenser</td>
<td>Pressure gradient transducer</td>
<td></td>
</tr>
<tr>
<td>Directional Pattern</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Range</td>
<td>50 Hz - 20 kHz</td>
<td>50 Hz - 20 kHz</td>
<td>50 Hz - 20 kHz</td>
</tr>
<tr>
<td>Sensitivity @ 1 kHz into 1 kohm</td>
<td>4.5 mV/Pa</td>
<td>4.7 mV/Pa ±1 dB</td>
<td>3.1 mV/Pa ±1 dB</td>
</tr>
<tr>
<td>Rated impedance</td>
<td>50 Ω</td>
<td>50 Ω</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Rated load impedance</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
</tr>
<tr>
<td>Equivalent SPL DIN/IEC 651</td>
<td>18 dB-A</td>
<td>16/18 dB-A</td>
<td>16/18 dB-A</td>
</tr>
<tr>
<td>S/N ratio DIN/IEC 651</td>
<td>76 dB</td>
<td>68 dB</td>
<td>66 dB</td>
</tr>
<tr>
<td>Maximum SPL for THD 0.5%</td>
<td>150 dB</td>
<td>138/148 dB</td>
<td>142/152 dB</td>
</tr>
<tr>
<td>Maximum Output Voltage</td>
<td>12 dBu</td>
<td>10 dBu</td>
<td>10 dBu</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>132 dB</td>
<td>122 dB</td>
<td>124 dB</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>48 V ± 4 V</td>
<td>48 V ± 4 V</td>
<td>48 V ± 4 V</td>
</tr>
<tr>
<td>Current consumption</td>
<td>3.5 mA</td>
<td>2 mA</td>
<td>2 mA</td>
</tr>
<tr>
<td>Weight</td>
<td>approx. 10.5 oz.</td>
<td>approx. 10 oz.</td>
<td>approx. 10 oz.</td>
</tr>
<tr>
<td>Dimensions</td>
<td>1.89 x 7.08˝</td>
<td>1.89 x 6.89˝</td>
<td>1.89 x 6.89˝</td>
</tr>
</tbody>
</table>
NEUMANN

KMS 140/ KMS 150

Condenser Vocalist Microphones

The KMS 140 (cardioid) and KMS 150 (hypercardioid) vocalist microphones have been developed for the use of instrumental and vocal soloists at very short range, and can also be hand-held. They incorporate a special acoustic filter and a transformerless, high-loadability amplifier to provide very effective protection against pop and other explosive sounds. Pop stability is excellent and sibilants and S-sounds are reproduced with all their natural accentuation. Although the acoustic filter effectively suppresses interference by plosive sounds, the distinctive directional characteristics of the capsules are retained all the way down to the bass region, lending the mics a high degree of feedback imperviousness when used for stage work. With two easily operated recessed switches, sensitivity can be reduced by 10 dB, and the transmission characteristics of the microphones matched to the vocal character of the soloist and the preferred pick-up distance (proximity effect).

The thick walled metal case of the microphones effectively blanket holding noises. The acoustic filters can be easily un-screwed and cleaned if necessary.

KU 100 Dummy Head

The KU 100 dummy head is a binaural stereo microphone. It resembles the human head and has two microphone capsules built into the ears. When listening through high-quality headphones it gives the illusion of being right at the scene of the acoustic events. When using the KU 100 the binaural stereo experience moves the listener into the scene of the original performance, in contrast to other space-related recording techniques, where the acoustic event is moved to the listener.

The dummy head is also used in industrial applications as a measuring device, for example in acoustic research. The KU 100 can be operated with 48v phantom powering, from an external power supply, or from the built-in battery. At the bottom of the unit is a switch for the different power supply modes, as well as connectors for balanced and unbalanced output signals. Inside the head are additional switches for 10dB attenuation and the high-pass filter.

◆ The KU 100 is a replica of the human head with a mic built into each ear. When the recorded audio signal is reproduced through high-quality headphones the listener perceives a sound image almost identical to the one he would have heard at the recording location of the dummy head (head-related stereophony).
◆ Balanced (XLR) and unbalanced (BNC) outputs
◆ When played back through loudspeakers, the sound matches that of stereo microphones, placed in the same position. However, a superior quality is added, that of a distinct spatial depth perception.
◆ The KU 100 is just as easy to use during creative radio drama productions, and music recordings where the room acoustics should be recorded at the same time
◆ It is also an important tool to preserve natural sounds of all kinds. In addition, the dummy head is used to examine and document the influence of noise in industrial applications under realistic conditions.

Includes a robust aluminum carrying case, external power supply, 5-pin XLR cable, and an adapter cable that splits the 5-pin XLR output into two 3-pin XLR connectors.
The “Series 180” consists of three compact miniature microphones with patterns that satisfy the demands of all common studio applications. Designed for economy-minded production, their slender shape and the transmission characteristics make them ideal for a wide range of applications in radio and television. The KM 183 (omni), KM 184 (cardioid), and KM 185 (hypercardioid) are available in either matte black or nickel finish. The mics come in a folding box with a windshield and two stand mounts that permit connection to the microphone body, or the XLR-connector.

The KM 183 is a pressure transducer with a boost of approximately 7dB at 10 kHz in the free field. In the diffuse sound field it has a flat frequency response. The pressure gradient transducers KM 184 and KM 185 feature very smooth frequency responses not only for the 0° axis, but also for lateral (off-axis) sound incidence. In typical usage, there is no coloration of sound over a wide pickup angle. The KM 185 features attenuation of sound incidence from the side or rear of about 10 dB, with minimum sensitivity at an angle of 120°. The KM 184 has a gentle rise at about 9 kHz.

The “Series 180” microphones have the same transformerless circuitry as is used in the KM 100 system, resulting in excellent technical specifications. Their output as in all Neumann microphones, is balanced and phantom (48v) powered. The KM 183 and KM 184 are available in stereo sets, packaged in wooden boxes.
Shotgun Microphones

The KMR 81i and KMR 82i are shotgun microphones with a high directivity that remains within the acceptance angle independent of the frequency. The advantage is that a sound source, for example an actor on stage, will not change its apparent tonal balance when moving within this area.

Shotgun microphones are particularly useful in recording situations where a microphone cannot be positioned within the desired distance of the sound source to produce a sufficiently loud signal level. Typical applications are film and video recordings, where the microphone should not appear in the picture. The KMR 82i is very often used on stage. The KMR 81i has been specifically designed for electronic news gathering.

**Acoustic Features**

- These mics use a combination of a pressure gradient transducer and an interference tube. If the wavelength of the frequency is longer than the tube length, the mics work as pressure gradient transducers. At higher frequencies they operate as interference transducers for lateral sound.
- Off-axis sound sources are picked up with reduced level, but without coloration. Therefore, the microphones are well suited to record individual instruments of an orchestra. The pickup areas of several shotgun microphones may even overlap, like during recordings on a large stage, without causing any problem.
- They are less sensitive to wind and pop noise when compared to other mics with similar high directivity. The KMR 81i/82i both feature extremely low self noise, good impulse response, and high output level.

**Polar Pattern**

- These mics have a very directional characteristic. Their mic capsule is positioned inside a housing tube that is acoustically open but has a high flow resistance. The directional patterns of the mics are lobe shaped. The attenuation of lateral sound is practically independent of the frequency. The KMR 82i has a frequency independent directivity within a pickup angle of 45° for audio signals that determine the tonal balance of the program material. For the KMR 81i, this angle is 90°.

**Filter and Attenuation (KMR 81i)**

The microphone has a 10dB attenuation switch to prevent the input of the following unit from overloading. A second switch activates a 200 Hz high-pass filter. Toward the lower frequencies the sensitivity of the microphone is attenuated by approximately 15dB at 50Hz. The frequency range above 200 Hz is unaffected.

**Using on Location**

The shotgun microphones feature very high output capability and a remarkably low self-noise level. Their low power consumption, light weight, and low sensitivity to wind and handling noise, make them ideal tools for news gathering on location. Small dimensions, together with a balanced center of gravity, make handling easy without any whiplash effect. However, when on location and during strong wind conditions, it is recommended you use the using additional wind screen (included). The wind screen is made of polyurethane foam and also serves as soft padding of the microphone in its leather carrying case. For mobile use a handle and an elastic suspension are available. An active handle with a built-in battery power supply makes an external phantom supply unnecessary.

**Filter KMR (82i)**

Between 2 kHz and 15 kHz the KMR 82i has a boost to compensate for HF transmission losses in air when recording distant sound sources. This may overemphasize any sibilance if the microphone is used close-up. Therefore, a two-position slide switch allows to select the setting that is best for balanced upper frequencies. The KMR 82i has a high-pass filter to suppress subsonic interference. The cutoff frequency may be raised to 120 Hz (-3 dB) with a built-in two-position slide switch.
Stereo Microphones

The SM 69 and USM 69 are condenser studio stereo microphones suitable for XY and MS recordings. The construction of the capsules is the same in both microphones. Therefore, the acoustic features of the transducers are identical. The only difference is the method of switching the polar patterns and the way the microphones are connected to the system. The SM 69 and USM 69 stereo microphones each have two separate dual-diaphragm capsules. These are mounted vertically and rotate against each other. The directional polar patterns can be selected separately for each capsule. The capsules operate independently from each other.

They can also be used as completely independent mono microphones. There are many applications when it is important to have a second mono microphone as a backup, or when the outputs of microphones with different polar response characteristics must be available simultaneously. The outputs of the two microphone channels can be linked (cascaded). In addition to the individual directional patterns, other characteristics are available through the combination of both channels.

**FEATURES**

- Two completely separate microphone capsules are positioned closely above each other within the capsule head. Their diaphragms are made out of gold-sputtered polyester film. The upper capsule rotates against the lower one over a range of 270°. Color markings on the lower capsule system help to identify the angle by which the upper capsule has been rotated.

- When sound waves reach the microphone capsules from different directions they will generate audio signals with different intensity only, but not with time differences, since the capsules are in close proximity and the sound arrives at both capsules simultaneously. The result is an intensity stereo signal that can be summed together for excellent mono compatibility without causing interference.

- The amplifiers feature high output capability and extremely low self noise. Distant as well as very loud sound sources at close range are easily recorded. Each amplifier has an active filter to suppress wind or structure borne noise.

- Mic systems operate independent from each other. The second amplifier will be unaffected, even in case of a faulty ground for one of the channels, or a short circuit in one of the outputs. The mic is reliable in mono usage, even if only one of the systems is operated and connected.

**Polar Patterns SM 69**

In addition to omnidirectional, cardioid and figure-8 polar patterns, this mic has six intermediate positions. The narrower characteristics suppress sound from the side more efficiently, while the wide-angle polar patterns are especially useful to record large sound sources. Patterns are selected remotely from the NS 69 i power supply. Two rotary switches are used to switch between nine different polar patterns for each system. The switches are marked in color and numbered corresponding to the respective microphone capsule.

**Polar Patterns USM 69**

Like the SM 69, the USM 69 has two built-in rotary switches. However, the five polar patterns of both capsules can be selected at the microphone itself. No special AC power supply or power adapters are necessary.

In addition to the omnidirectional, cardioid, and figure-8 pattern, Neumann added a hypercardioid and a wide-angle cardioid pattern. A built-in DC converter generates the required capsule polarizing voltages.

**Boundary Layer Microphone**

The GFM 132 is a boundary layer microphone.

Through computer simulation Neumann optimized the design to be free of any comb filter effects due to reflections, typical of other such microphones.

The smooth frequency response for all angles of incidence exhibits a rise in the upper frequency range. This assures that all sound sources, even distant ones, will be recorded with clarity and presence. Therefore, typical applications are for live recordings, such as in the orchestra pit of opera houses, theaters and on stage. The back of the microphone has non-slip pads for its use in a horizontal or inclined position, and holes for wall suspension. It is supplied with a wooden case and a wind screen.
Stereo Shotgun Microphone

The RSM 191 is a stereo microphone system consisting of the microphone and the MTX 191 A matrix amplifier. It has an adjustable pick-up angle and high directivity. The microphone has two separate capsule systems, a hypercardioid element and a figure-8, both in a single, lightweight body. Together they generate the mid and the side signals. The matrix amplifier controls the width of the stereo image by changing the gain of the side signal relative to the middle signal in six 3dB steps.

The output signals of the matrix amplifier are either mid-side (MS) or left/right (XY). The signals are converted through transformerless sum-and-difference circuitry. The balanced, transformerless technology permits the use of long cables between the mic, the matrix amplifier and the following mic input of other signal processing equipment.

The RSM 191 consists of a capsule head containing two separate transducer systems and an amplifier section with two independent transformerless microphone amplifiers. An interference tube system with a hypercardioid characteristic generates the middle signal, while a horizontal figure-8 assembly provides the side signal. The RSM 191 is an ideal microphone for outdoor stereophonic news coverage, even in extremely noisy surroundings and stereo recordings for film and television where the actors are recorded simultaneously with acoustic ambiance, or an orchestra.

**Features**

- The RSM 191 achieves its high directivity and special acoustic features through a unique construction. The microphone capsule assembly is mounted inside a housing tube that is acoustically open but has a high flow resistance.
- This results in a high driving force for the diaphragm, even with a low pressure gradient factor of the capsule. Therefore, the microphone can suppress unwanted off-axis interference to a considerably higher degree than other microphones without such an interference tube.
- The middle system (M-signal) combines high attenuation of lateral sound incidence, similar to a hypercardioid characteristic (which is about 10 dB), with the large front-to-back ratio of the super-cardioid characteristic.
- Therefore, sound from the rear is likewise attenuated by approximately 10 dB. This design makes the mic less sensitive to wind or pop noise than other shotgun mics.
- The side system (S-signal) consists of two single capsules arranged back to back, closely behind the interference tube (M-signal) capsule. Arrows engraved on the mic housing show their orientation.
- The uniform and balanced performance characteristic of the microphone system is achieved without resorting to corrective resonance effects. Therefore, the microphone maintains an excellent impulse response, reproducing all transient phenomena in music and speech without coloration. The entire internal construction is decoupled from the housing to avoid structure borne and handling noise.
- Output signals of the included matrix amplifier are in MS or XY format. The small capsules are mounted in close proximity to ensure transparent and coloration-free stereo sound with excellent mono-compatibility. The stereo acceptance angle is variable and controlled remotely.
- Filter and Attenuation
  - For the handling of very high sound pressure levels, a 10dB attenuation can be switched ON to avoid overloading of the following equipment.
  - To suppress structure borne noise, a high-pass filter in the matrix box provides cutoff frequencies of 40 Hz, 80 Hz, and 200 Hz.

**Battery Supply**

- The RSM 191 system is fed from either 2 x P 48 phantom power or from a 9 V battery inside the matrix box. One alkaline battery provides 8 hours of operation.
- The complete microphone system comes in a robust aluminum case. Along with the microphone and the matrix amplifier the case contains a windscreen, the special interconnecting cable and an adapter cable that splits the 5-pin XLR output of the matrix amplifier into two 3-pin XLR connectors.


**KM100**

**Miniature Microphone System**

The KM 100 is a variable condenser miniature microphone system that consists of several active microphone capsules with different directional characteristics, an output stage, and numerous accessories. There are seven active capsules available: omni diffuse-field equalized, omni free-field equalized, cardioid, wide-angle cardioid, cardioid with bass roll-off, hypercardioid, and figure-8. Through the modular construction of mic capsules and the output stage it is very easy to adapt the system to a wide range of applications. The mic becomes nearly invisible during work with cameras (film, video), on stage, or suspended from the ceiling in a concert hall. An active capsule can also be screwed directly onto the output stage. The result is a compact microphone.

**FEATURES**

**Construction**

Microphones are approx. 4” long (except the KM 120 which is 5”) and 22mm in diameter. They consist of the condenser capsule and the output stage. Both parts can be unscrewed from each other. The system offers several condenser capsules with different directional characteristics. Numerous accessories can be mounted between the capsules and the output stage. The capsules attach to cables, capsule extensions, swivel mounts, table stands, goose-necks, stereo mounts, and hangers. This makes it very easy to adapt the system to a wide range of applications.

The KM 100 powering stage and the active microphone capsule may be separated by up to 50m of interconnecting cable. These cables are 3mm in diameter, and therefore very inconspicuous.

**Pre-attenuation**

The output stage has a -10 dB switch. Attenuation is achieved by reducing the capsule voltage to one third. When the switch is on, the microphone is capable of accepting sound pressure levels up to 150 dB without being overloaded.

**Connectors**

To diminish the number of connectors within the KM 100 System some accessories were modified. They can now be screwed directly onto the KM 100 output stage without using the KA 100 cable adapter. The new accessories which include the cable adapter, were renamed adding the suffix KA. For example: LC 3 is now LC 3 KA. The separate KA 100 cable, needed for older accessories, will be available also in the future. The KM 100 output stage has a 3-pin XLR connector.

**Stereo Recordings**

By means of the AC 30 adapter cable two active capsules, AK 20 and e.g. AK 40 can be connected as MS stereo pair directly with the MTX 191 (A) matrix amplifier. The XY or MS signal is then available at the 5-pin XLR output connector of the MTX 191 (A), and the recording angle can be electrically remote controlled. The output stages KM 100 are then not required.

**Stereo Set**

The cardioid and hypercardioid microphones are also available as complete stereo sets, SKM 140 and SKM 150, including all accessories in a single jeweler’s box.

**Sound Diffraction Sphere**

The SBK 130 sound diffraction sphere slips onto the front of the KM 130/KM 131 pressure microphones. The diaphragm becomes an integral part of the surface of the sphere. This affects the frequency response of the microphones. While sounds coming from the front-half space are emphasized by up to 2.5 dB between 2 kHz and 10 kHz, sounds arriving from the rear-half space are attenuated by a maximum of 2.5 dB in the range above 5 kHz. Since the sound diffraction sphere causes the pressure buildup of the KM 130/KM 131 pressure microphones to begin earlier, the frequency response rises smoothly in the middle and upper range. This is similar to a typical pressure gradient microphone, where the directivity increases with rising frequencies. However, since the KM 130/KM 131 are pressure microphones, they maintain a linear sensitivity down to the lowest frequencies. This changing directivity allows to record at a greater distance from the sound source, and makes the KM 130/KM 131 microphones especially suited as stereo main microphones in A-B configurations.
**KM 100F**

**The KM 100F attenuates frequencies below 80 Hz at 6 dB/octave. This eliminates or suppresses interference caused by wind or structure-borne noise. A built-in slide switch allows to raise the cut-off frequency (-3 dB point) from 80 Hz to 120 Hz. An additional slide switch lowers the frequency ( -3 dB point) from 80 Hz to 120 Hz.**

**AK 20 Figure-8**

The AK 20 is a pressure gradient transducer with a figure-8 pattern in a single diaphragm (just 16mm in diameter). All sound field components reach the diaphragm directly. This results in identical frequency response curves and output levels at 0° and 180° sound incidence. Via optional accessories, the AK 20 can also be combined with other active capsules or microphones to obtain an MS-Stereo setup.

**AK 31 Omni-directional**

The AK 31 is a free-field equalized pressure transducer with a flat frequency response up to 20 kHz (in the free field). In the diffuse field this microphone has a boost of approximately 7 dB at 10 kHz.

**AK 40 Cardioid**

The AK 40 is a pressure gradient transducer with cardioid pattern. The frequency curves are very smooth and match 0° sound incidence. Sound from sources within a pickup angle of ± 135° is reproduced without any coloration.

**AK 43 Cardioid Wide Angle**

The AK 43 is a pressure gradient transducer with wide-angle cardioid characteristic. Attenuation at 90° is 4 dB, at 135° it is 6 dB and at 180° it is 11 dB. The frequency response curves for sound sources within an angle of ± 90° are parallel up to 12 kHz.

**AK 45 Cardioid with Low-Frequency Roll-Off**

The AK 45 is a pressure gradient transducer with cardioid pattern similar to the AK 40. It also has a bass roll-off that is useful when low frequencies may cause difficulties. The AK 45 is optimized for a flat low frequency response at a recording distance of 15 cm (“speech cardioid”).

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**KM 100 Powering Module**

- The KM 100 is 48v phantom-powered and uses transformerless output circuitry. This has several advantages:
  - It features high output capability and extremely low self noise.
  - It provides exceptionally clean sound, free of any coloration.
  - As with traditional transformers, this circuit approach ensures good common mode rejection.
  - The balanced output signal is protected against interference.
  - All sensitive components are protected within the capsule. As a result, the quality of the audio signal is never compromised through the use of accessories, for example, when the capsule is detached from the output stage and mounted on a cable or a gooseneck. Even with a long cable between active capsule and output stage, the signal is immune to external interference.

**Filtered Powering Module**

The KM 100F is offered as an alternative to the KM 100. In contrast to the KM 100, which has a flat frequency response, the KM 100F attenuates frequencies below 80 Hz at 6 dB/octave. This eliminates or suppresses interference caused by wind or structure-borne noise. A built-in slide switch allows to raise the cut-off frequency (-3 dB point) from 80 Hz to 120 Hz. An additional slide switch lowers the sensitivity by 10 dB.

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**KM 120**

**KM 130**

**KM 131**

**KM 140**

**KM 143**

**KM 145**

**KM 150**

<table>
<thead>
<tr>
<th>Operating Principle (Transducer)</th>
<th>Pressure</th>
<th>Pressure</th>
<th>Pressure</th>
<th>Cardioid</th>
<th>Wide Angle</th>
<th>Cardioid</th>
<th>Cardioid</th>
<th>Hypercardioid</th>
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<tbody>
<tr>
<td>Directional Pattern</td>
<td>Side-fire figure 8</td>
<td>Omni diff. field eq</td>
<td>Omni free field eq</td>
<td>Press. grad.</td>
<td>Press. grad</td>
<td>Press. grad</td>
<td>Press. grad</td>
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<tr>
<td>Frequency Range</td>
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<td>20 - 20 kHz</td>
<td>20 - 20 kHz</td>
<td>20 - 20 kHz</td>
</tr>
<tr>
<td>Sensitivity at 1 kHz into 1 kohm</td>
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<td>12 mV/Pa</td>
<td>12 mV/Pa</td>
<td>15 mV/Pa</td>
<td>15 mV/Pa</td>
<td>14 mV/Pa</td>
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</tr>
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<td>50 Ω</td>
<td>50 Ω</td>
<td>50 Ω</td>
<td>50 Ω</td>
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</tr>
<tr>
<td>Rated Load Impedance</td>
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<td>Equivalent SPL*</td>
<td>17.5 dB-A</td>
<td>16 dB-A</td>
<td>16 dB-A</td>
<td>16 dB-A</td>
<td>16 dB-A</td>
<td>16 dB-A</td>
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<td>S/N Ratio*</td>
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<td>78 dB</td>
<td>78 dB</td>
<td>78 dB</td>
<td>78 dB</td>
<td>78 dB</td>
<td>76 dB</td>
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<tr>
<td>Max SPL**</td>
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<td>140 dB</td>
<td>140 dB</td>
<td>138 dB</td>
<td>138 dB</td>
<td>138 dB</td>
<td>142 dB</td>
<td></td>
</tr>
<tr>
<td>Max SPL** with pre-attenuation</td>
<td>150 dB</td>
<td>150 dB</td>
<td>150 dB</td>
<td>148 dB</td>
<td>148 dB</td>
<td>148 dB</td>
<td>152 dB</td>
<td></td>
</tr>
<tr>
<td>Maximum Output Voltage</td>
<td>10 dBu</td>
<td>10 dBu</td>
<td>10 dBu</td>
<td>10 dBu</td>
<td>10 dBu</td>
<td>10 dBu</td>
<td>10 dBu</td>
<td></td>
</tr>
<tr>
<td>Dyn. Range of the Mic. Amp*</td>
<td>122.5 dB</td>
<td>124 dB</td>
<td>124 dB</td>
<td>122 dB</td>
<td>122 dB</td>
<td>121 dB</td>
<td>124 dB</td>
<td></td>
</tr>
<tr>
<td>Dimension (DxL)</td>
<td>.94 x 87.3</td>
<td>.87 x 3.6</td>
<td>.87 x 3.6</td>
<td>.87 x 3.6</td>
<td>.87 x 93.6</td>
<td>.87 x 3.6</td>
<td>.87 x 3.6</td>
<td></td>
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</tbody>
</table>

* DIN/IEC 651   **for THD 0.5%
NT1-A Cardioid

Today’s musicians and recording engineers demand clarity and dynamic range and the NT1-A, a true large-capsule condenser mic, with state-of-the-art, transformerless FET circuitry meets these demands in both vocal and instrumental performances. The heart of the NT1-A, the capsule, features a full 1˝ gold sputtered diaphragm. This precision transducer is mounted in a proprietary internal shock mounting system. The electronic components are mounted on a revolutionary monocoque sub assembly which assures structural integrity. The microphone head is made of two layers of high-grade stainless steel. The outer layer is of an extremely heavy open weave to provide strength, the internal fine layer provides an effective ‘pop’ shield while still being acoustically transparent. Supplied stand mount with 3/8 - 5/8” thread adapter (RM-1) allows for easy mounting and positioning. Also includes a zippered pouch and windshield.

NT-3 Hypercardioid

The baby of the Rode family, the stylish and modern NT3 is a very capable performer with a wide range of applications in studio, stage, location and broadcast environments. Made from the finest components to deliver results demanded by engineers and musicians alike, the NT3 is a true condenser with transformerless output. The internal capsule is shock mounted and housed in a substantial cast-metal body with a satin-nickel finish. It features battery and phantom power and its low noise (under 16dB SPL A-weighted) makes it hard to match. Dynamic range is greater than 123dB with a maximum SPL of 140dB and sensitivity is a healthy -39dB (ref 1V/Pa).

NT1000 Cardioid

With its ultra low-noise transformerless circuitry the NT 1000 brings new standards to the recording industry. When today’s musicians and recording engineers demand clarity and dynamic range, they demand large capsule performance. The NT 1000 is superior in both vocal and instrumental performances. Made from high quality components, including internal capsule shock-mounting the NT1000 provides unmatched quality and sound.

NT4 Stereo Microphone

In the past, true stereo recording required the use of ‘matched’ microphones. More than simply using two of the same mic models, matched pairs had to be stringently manufactured so variables such as frequency plots, sensitivity ratings and SPL characteristics would be almost identical. However, even with two matched ‘mono’ microphones, achieving a successful stereo image still depends on how each mic is placed in relation to the other. Matched mic pairs also need a uniform angle between them to achieve the same effect. This all changes with the NT4.

A studio-grade go-anywhere stereo condenser, the NT4 is a totally flexible mic that enables direct connection to most recording devices. It utilizes two 1/2” matched capsules in a perfectly aligned -90°, XY arrangement. All you have to do is point and keep an eye on recording level. It requires 48V phantom power, but for flexibility, a 9v battery can also be used. Ideal for location recording for film and video. Includes Røde case with a stand mount, wind shield and custom stereo cables (XLR and minijack).

NT5 Stereo Microphones

Using the same capsule design as the NT4, the NT5 cardioid condenser mic comes as a matched pair in a plastic case complete with clips and foam windshields. The NT5 is a microphone along the lines of the Neumann KM 184 or AKG C451 (but quite shorter). As with the NT4, there are no bass roll-off or pad switches on the microphone. The build quality is good and because the capsule is the same, the sound is similar to that of the NT4.

There is no battery option (requires phantom power), but you do get the extra flexibility of having two separate microphones. For stereo work this means you can vary the angle between them, which will affect the stereo spread and coverage. You can also adjust the spacing of the mics in order to use other stereo techniques, rather than just coincident pair recordings (ORTF for example). Of course, if you don’t need to work in stereo, you have two good mics to use individually.
True Large Diaphragm Condenser Capsule

Developed using only the finest components, the Broadcaster is a large capsule condenser microphone that gives a warm vocal sound, wide dynamic range and extended frequency response and has a unique LED ‘ON AIR’ indicator. The mic features a cardioid polar pattern with high 180° rejection, a voice-tailored low-cut filter and ultra low-noise. Designed to provide performance and reliability, it offers a rugged stainless steel body, has an internal shock-mounted capsule to reduce structural borne noise and a fine mesh ‘pop shield’ to eliminate plosives.

CLASSIC II 1” Tube Microphone

From its custom designed Jensen transformer to the dual pressure gradient transducer this valve microphone is a classic. Machine from solid brass, hand polished, glass bead blasted and coated in satin nickel, this is a microphone with Class A valve circuitry that gives unmatched warmth, clarity and sensitivity when critical vocal and instrument recording is required.

Weighing in at just over two pounds, the Classic II is a heavy, magnificently crafted instrument. The microphone’s body is machine-tooled from solid brass and encapsulates two grille meshes—a finely woven inner headscreen and a heavier gauge, outer screen. A gold dot indicates the front of the mic. The Classic II features a 1” dual-pressure gradient capsule with an edge-terminated, gold-sputtered diaphragm. Further, the microphone incorporates a low-noise, 6072 twin-triode tube preamplifier that feeds into a custom Jensen output transformer. There are no controls on the microphone, yet the Classic II provides a wealth of options for securing your desired sound.

- With nine polar patterns (a variety of intermediate positions between the three main patterns—cardioid, omni and figure-8), two pad settings (-10 and -20dB) and a two-position highpass filter (-15 or -21dB of roll-off at 20 Hz), the Classic II can easily be tailored to best suit your needs.
- Frequency response is 20Hz to 20kHz, with a sensitivity rating of 13mV/Pa. Maximum SPL handling is 130 dB, noise is less than 22dB and impedance is 250 ohms.
- Overall frequency response is generally flat, but for vocal recording, the cardioid pattern exhibits a mild boost in the mid to upper midrange. In omni mode, there is a 6dB bump at around 10 kHz.
- A double-shielded, oxygen-free multicore 12-pin cable connects the mic to the power supply. Connectors are custom-tooled military-grade, gold-plated to ensure optimum signal quality. Audio output is routed via a standard XLR from power supply.
- Solidly built external power supply can be set for 220-240V operation. A ground lift switch is provided should you encounter a ground loop hum. Pads and highpass filter are remotely switched from the microphone's power supply.
- Includes an industrial-strength, foam-lined aluminum flight case, dedicated power supply, 30’ multicore cable, stand-mount adapter, and a shockmount suspension.

<table>
<thead>
<tr>
<th>Polar Pattern</th>
<th>NT1-A</th>
<th>NT2</th>
<th>NT3</th>
<th>NT1000</th>
<th>Broadcaster</th>
<th>Classic II</th>
<th>NTV</th>
<th>NTK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response</td>
<td>20 - 20kHz</td>
<td>20 - 20kHz</td>
<td>20-20kHz</td>
<td>20 - 20kHz</td>
<td>20 - 20kHz</td>
<td>20 - 20kHz</td>
<td>20 - 20kHz</td>
<td>20 - 20kHz</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>100 Ω</td>
<td>40</td>
<td>200</td>
<td>100 Ω</td>
<td>40</td>
<td>200</td>
<td>200</td>
<td>200 Ω</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>-31.9 dB</td>
<td>-36 dB</td>
<td>-39 dB</td>
<td>-36 dB</td>
<td>-34 dB</td>
<td>-37 dB</td>
<td>-31 dB</td>
<td>-38 dB</td>
</tr>
<tr>
<td>Equivalent Noise</td>
<td>5 dB</td>
<td>&lt; 14 dB</td>
<td>&lt; 17 dB</td>
<td>6 dB</td>
<td>&lt; 14 dB</td>
<td>&lt; 18 dB</td>
<td>&lt; 19 dB</td>
<td>&lt; 12 dB</td>
</tr>
<tr>
<td>Maximum Output</td>
<td>+13dBu</td>
<td>+2dBu</td>
<td>+9.5dBu</td>
<td>+13dBu</td>
<td>+2dBu</td>
<td>+2dBu</td>
<td>2dBu</td>
<td>&gt; +29dBu</td>
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<tr>
<td>Dynamic Range</td>
<td>&gt; 132 dB</td>
<td>&gt; 116 dB</td>
<td>&gt; 123 dB</td>
<td>&gt; 134 dB</td>
<td>&gt; 114 dB</td>
<td>&gt; 113 dB</td>
<td>&gt; 106 dB</td>
<td>&gt; 147 dB</td>
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<tr>
<td>Maximum SPL</td>
<td>&gt; 137 dB</td>
<td>&gt; 130 dB</td>
<td>&gt; 140 dB</td>
<td>&gt; 140 dB</td>
<td>&gt; 128 dB</td>
<td>131 dB</td>
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<td>Signal/Noise Ratio</td>
<td>88dB</td>
<td>&gt; 80 dB</td>
<td>&gt; 77 dB</td>
<td>&gt; 88 dB</td>
<td>&gt; 80 dB</td>
<td>&gt; 76 dB</td>
<td>&gt; 75 dB</td>
<td>&gt; 82 dB</td>
</tr>
</tbody>
</table>
R11 Hypercardioid Vocal Mic

The R11 is a very affordable dynamic mic designed for use in live performance applications such as public speaking, DJ and Karaoke. Hypercardioid pattern minimizes feedback, transformerless design assures reduced noise and low distortion, and Neodymium magnet provides 6dB of noiseless gain. A handy on/off switch is available as well for on-stage control.

Lightweight and compact, the R11 and R21 can be mounted on any standard mic stand (using the supplied mic clip) or handheld for long periods of time. They are also offered in a cost-effective “three-pack” with foam-lined, impact resistant carrying case for convenience when transporting the microphones from venue to venue.

R21 Cardioid Vocal/Recording Mic

Bring a high level of accuracy and audio performance to both live and recording applications. The R21 is a hand held dynamic microphone equipped with a linear frequency response for superior reproduction, a tight cardioid pattern to reduce feedback, and a special shock-mounted element to minimize handling noise. It is also designed to withstand high sound pressure levels. The R21 features gold-plated XLR pins to assure positive connectivity, and a built-in wind screen to protect against most wind and breathing noise. Road-proof design includes rugged zinc alloy die-cast case, heavy gauge mesh and anti-dent ring to ensure reliable performance in the most demanding environments.

P R I C I N G

<table>
<thead>
<tr>
<th>Microphone</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>R11 Microphone</td>
<td>24.95</td>
</tr>
<tr>
<td>R11 Microphone 3-Pack</td>
<td>49.95</td>
</tr>
<tr>
<td>R21 Microphone</td>
<td>24.95</td>
</tr>
<tr>
<td>R21 Microphone 3-Pack</td>
<td>49.95</td>
</tr>
<tr>
<td>VP1 Mic Kit</td>
<td>39.95</td>
</tr>
</tbody>
</table>

Offering the complete microphone solution the VP1 includes the R21 Dynamic Mic, a heavy duty tripod mic stand, a 25’ XLR microphone cable and a mic clip (with Euro adapter) all in one ready-to-go box.

S11/S12 Cardioid and Hypercardioid Microphones

The S11 (cardioid) and S12 (hypercardioid) are designed for use in live performance and public address environments. Dynamic design enables them to tolerate high sound pressure levels (SPLs) such as those generated by drums and amplified instruments, and their unidirectional patterns ensure the delivery of a strong, crisp signal from the audio source directly in front of the microphone capsule. The S11 has a linear frequency response that produces a smooth balanced sound, the S12 has a flat, full-range frequency response for exceptional sound quality. The S12 also incorporates a high energy Neodymium mic element for high output and up to 6dB of additional gain. They are both particularly well-suited for use with Samson wireless systems.

- Lightweight (just 8 ounces) and compact (less than 9” long, including head), they can be mounted on any standard microphone stand (using the supplied mic clip) or handheld for long periods of time.
- Rugged zinc-casting, silicon anti-dent ring (protects windscreen) and gold-plated XLR connector ensure reliable performance in the most demanding environments.
- Low impedance 600 ohm output enables strong, full bandwidth signal to be sent over long cable runs.
- Mic clip and carry case included.
High output, linear response, full-frequency reproduction, low feedback and quiet handling. That’s what all Samson microphones deliver. From the versatility and exceptional audio performance of their Qmic, Q1, Q2 and Q3 vocal and instrumental microphones to the accessibly-priced and rock-solid R and S series mics. In addition, the QE and QV headset mics break new ground with a clear, balanced vocal response that stands out in vocal performance and fitness situations.

**Q1 Condenser Vocal Microphone**

The Q1 is a hand held condenser vocal microphone that excels in both live and project studio applications. Equipped with a linear frequency response for superior reproduction, it is also designed to withstand high sound pressure levels. Extremely sensitive, it employs a tight cardioid pattern to reduce feedback. A special shock-mounted element minimizes handling noise and provides additional protection. Ideal for live performance vocals, public speaking, project studio vocal.

- Tight cardioid polar pattern minimizes feedback problems and effectively rejects signals not originating directly in front of the mic capsule.
- Special shock-mounting allows multi axis movement of the mic element to greatly reduce handling noise.
- Accepts 11 to 52v DC phantom power
- Withstands high SPLs lending itself to a wide range of miking situations
- Full range frequency response for optimum reproduction and exceptionally clear sound.
- Rugged zinc-casting and silicon anti-dent ring ensures reliable performance in even the most demanding environments.
- Can be mounted on any standard mic stand (using the included mic clip) or handheld for long periods without inducing fatigue.
- Includes foam-lined carrying case for convenience
- Built-in wind screen protects against wind and breath noise. Optional foam windscreen is available for adverse conditions.

**Qmic**

Hypercardioid Vocal Microphone

Fast, highly precise and designed for today’s live sound reinforcement and PA situations, the Qmic has a special midrange “peak” at 2 kHz to reproduce vocals with absolute clarity and definition. Manufactured with extreme care and the highest quality components, the Qmic also features a unique humbucking voice coil to eliminate magnetic field interference and a multi-axis shock-mounted mic element that greatly reduces handling noise. A real standout on stage and in the studio, the Qmic is also particularly well-suited for use with Samson wireless systems.

- Full range frequency response with a midrange “presence” peak at 2 kHz for optimum reproduction of vocals and exceptionally clear, crisp sound.
- Unique triple-plated multi-stage windscreen enables “up-close” usage of the Qmic and greatly reduces pops, sibilance and onstage noise.
- Special shock-mounting allows 360° X-Y axis movement of the mic element in order to greatly reduce handling noise.
- Lightweight aluminum humbucking voice-coil eliminates magnetic field interference providing true hum rejection at the source.
- High energy Neodymium element delivers high output and exceptional sound quality.
- Rugged zinc-casting, silicon anti-dent ring (protects windscreen) and gold-plated XLR connector ensure reliable performance in the most demanding environments.
- Includes foam-lined carrying case and mic-clip
Cardioid and Hypercardioid Dynamic Mics

Designed for use in live performance, the compact Q2 (cardioid) is equally effective as a vocal or instrument mic, while the Q3 (hypercardioid) is optimized for drum and amplified instrument miking situations. They incorporate a transformerless design for extended low frequency response without distortion, aluminum humbucking voice coil, and a single-stage windscreen and filter to reduce pops and sibilance. High energy Neodymium mic element delivers high output with unmatched sound quality. Both include a foam-lined carry case, gold-plated XLR connector and a special Euro-metric adapter. They are also particularly well-suited for use with Samson wireless systems.

- Unique triple-plated multi-stage windscreen enables “up-close” usage and greatly reduces pops, sibilance and onstage noise.
- Switchable 10 dB pad enables use with high sound pressure level (SPL) sources.
- Switchable 12dB per octave high pass filter eliminates unwanted low frequency noise.
- Full range (50Hz-18 kHz) frequency response for clear, crisp audio. The QV is flat to 10kHz, while the QE utilizes a midrange “presence” peak for optimum reproduction of speech.
- The Q7 is moisture protected, the QE water resistant, making them suitable for use in high-humidity environments.
- Internal RF suppression makes the QE suitable for use in high-RF areas.
- Hypercardioid (QV) and bi-directional noise cancellation design (QE) reduces back-ground noise and feedback.
- Compliant molding reduces mic handling noise, and the booms bend smoothly, hold their shape and are rated to withstand over a thousand 90° bends without degrading.
- The mics are powered via the supplied PM4 phantom power adapter which also transforms the impedance from high to low to compensate for long cable runs.

Q7
Neodymium Dynamic Cardioid Microphone

Maybe the ultimate all-purpose mic. The Q7 is outstanding for vocals in the studio or on stage. It has a high output, low impedance design, and a shock-mounted Neodymium dynamic mic element providing a cardioid pickup pattern. Includes a carry case and mic clip.

- Outstanding vocal mic for stage and studio
- High output, low impedance design
- Neodymium dynamic mic element
- Cardioid pickup pattern
- Multi-axis shock-mount element
- Includes case and mic clip

QE/ QV Headset Microphones

Designed for dancers, aerobics and fitness trainers in high-humidity environments, the Qe headset mic is light, comfortable and features a water-resistant mic element to protect against perspiration. This mic can be individually adjusted for a perfect fit. The Qv headset mic allows drummers, keyboardists and other musicians to perform “hands free” vocals without affecting their playing. It produces a full-range sound with a enough definition to ensure that every word is heard clearly, even at higher volume levels. Both headsets offer a lightweight, low visibility design for unobtrusive use and use a high-quality electret condenser element for high output and exceptional sound quality.

- Switchable 10 dB pad enables use with high sound pressure level (SPL) sources.
- Switchable 12dB per octave high pass filter eliminates unwanted low frequency noise.
- Unique triple-plated multi-stage windscreen enables “up-close” usage and greatly reduces pops, sibilance and onstage noise.
- Q2 mounts on any standard mic stand (using the included mic clip) or can be handheld for long periods of time.
- The Q3 mounts on a mic stand (no clip required) and rotates mechanically 90° for optimum placement—ideal when miking large drum kits on small stages.
- Rugged zinc-casting and silicon anti-dent ring ensures reliability in the toughest environments.
## SAMSON

### CONDENSER MICS

<table>
<thead>
<tr>
<th><strong>C01</strong></th>
<th><strong>C03</strong> Multi-Pattern Condenser Mic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Large Diaphragm Mic</strong></td>
<td>An incredibly flexible and great sounding studio condenser microphone, the C03 has two large (19mm) diaphragm capsules and switchable pickup patterns: super cardioid, omni and figure-8. Ideal for recording multiple vocals at once, acoustic instruments, room miking and more. It has a switchable high-pass filter, selectable 10dB pad, gold-plated XLR connector and 48v phantom power LED indicator.</td>
</tr>
</tbody>
</table>
| Great for recording vocals, acoustic instruments and for use as overhead drum mic, the C01 is accurate, detailed and smooth with a warm bass and extended top end. This sturdy microphone has a large 19mm diaphragm that produces a smooth flat frequency response. It features a heavy gauge mesh grill screen, a gold plated XLR connector and an LED indicating 48v phantom power. | ◆ Switchable high-pass filter and 10dB pad  
◆ Gold-plated XLR connectors  
◆ Carry Case & swivel mount included  
◆ Optional SP01 shock-mount available |
| **Cardioid pickup pattern**  
**Smooth, flat frequency response**  
(40Hz - 18kHz)  
**Includes a swivel stand mount**  
**Optional SP01 shock-mount available** | |

<table>
<thead>
<tr>
<th><strong>C02</strong> Pencil Condenser Mic</th>
<th><strong>C05</strong> Handheld Condenser Mic</th>
</tr>
</thead>
<tbody>
<tr>
<td>A beautifully crafted pencil-style condenser mic, the C02 is designed for use with acoustic instruments, cymbals, percussion, piano and in overhead miking situations. Pencil condensers are particularly useful in miking acoustic guitars. The C02 has a highly-focused cardioid condenser pickup pattern, gold-plated XLR connectors comes as a stereo pair in a rugged carry case. Also includes two shock mount mic clips.</td>
<td>The C05 offers Samson condenser technology in a comfortable to use hand-held design. It has cardioid pickup pattern, smooth, flat frequency response, a multi-axis shock-mounted element, and gold-plated XLR connectors. Includes a convenient carry case and mic clip.</td>
</tr>
</tbody>
</table>
| **Cardioid Pickup Pattern**  
**Gold-plated XLR connectors**  
**Carry case & shock-mounted mic clips included** | ◆ Cardioid pickup pattern  
◆ 19mm shock-mounted capsule  
◆ Smooth, flat frequency response  
◆ Multi-axis shock-mounted element  
◆ Gold-plated XLR connectors  
◆ Carry case and mic clip included |

### SAMSON MICROPHONE ACCESSORIES

<table>
<thead>
<tr>
<th><strong>LS2 Lightweight Speaker Stand</strong></th>
<th><strong>BT4 Telescopic Boom Mic Stand</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfect for small to medium sized pole-mount PA speakers. Adjustable, up to 6’ in height. 1¾” diameter pole fits virtually all speakers. 55 lbs. max weight. Sold as a pair.</td>
<td>Heavy duty stand, with adjustable boom. All die-cast and steel construction, mic clip included.</td>
</tr>
</tbody>
</table>
| **TS100 Lightweight Speaker Stand**  
For larger PA speakers. Strong lightweight aluminum construction. 1¾” diameter pole fits virtually all speakers. 110 lb. maximum recommended weight. | **MK5 Boom Mic Stand Kit**  
Includes an adjustable boom mic stand, 18’ Samson XLR mic cable, mic clip and windscreen. |
| **BL3 Ultra-light Boom Mic Stand**  
A lightweight collapsible tripod boom mic stand. Super-strong nylon hardware, mic clip included. | **MB1 Mini Boom Stand**  
Perfect for miking kick drums and speaker cabinets. Heavy duty steel and die-cast construction. Mic clip included. |
| **DMC100 Drum Mic Clip Set**  
Set includes three adjustable rim-clip drum mic clips with cable management | **PS01 Microphone Pop Filter**  
Features universal mic stand mounting bracket and flexible metal gooseneck. |
| **WS1 Windscren 5-pack**  
Five black foam windscreens | **MC18 Mic Cable 3-Pack**  
High quality 18’ XLR mic cables |
Q Kick
Dynamic Drum Mic

An incredibly well-made kick drum mic. Rigid, and featuring a large diaphragm element, the Q Kick sounds better than kick drum mics costing hundreds more. Mic stand swivel mount and carry case included.

- Large diaphragm dynamic element
- Cardioid polar pattern reduces feedback
- Gold-plated XLR connector
- Mic stand swivel mount included
- Carry case included

Q Snare
Dynamic Drum Mic

Designed for high SPL and durability, the Q Snare is the right choice for stage and studio. The capsule has been specially designed to accurately reproduce the frequencies and SPL of snare drums. Rigid rim-mount mic clip with cable management and carry case included.

- High SPL dynamic mic in a rugged casing
- Cardioid polar pattern reduces feedback
- Smooth, flat frequency response
- Voiced particularly for snare drum
- Gold-plated XLR connector
- Rigid rim-mount DM C-100 mic clip with cable management included
- Carry case included

HM40
Horn/Woodwind Condenser Mic

This mini condenser is designed for horns, rich and clear, focused, with the ability to handle serious SPL. High output miniature condenser mic element with a sturdy clip and flexible goose neck. Excellent for live performance and recording, the HM 40 has a P-3 three-pin mini XLR connector for use with Samson wireless systems, and also includes PM 5 phantom power adapter (P-3 to standard XLR) for use with standard mic cables. Rugged road case included.

3KIT
3-piece Dynamic Drum Mic featuring Q Tom

Sold in a three pack, the Q Tom is the perfect complement to Samson’s Q Snare. It was designed especially for the tone and SPL of tom-toms. Rigid rim-mount mic clips with cable management and carry case included.

5KIT
5-piece Drum Mic Set

A comprehensive drum mic set up in a sturdy road case. Features one Q Kick mic, one Q Snare, three Q Tom mics and a road case.

7KIT
7-piece Drum Mic Set

Everything you could want for miking drums. A complete set of our dynamic drum mics and a pair of C02 pencil condensers for overheads or close-miking cymbals. Features one Q Kick mic, one Q Snare, three Q Tom mics, two C02 pencil condensers and a road case.
The New Standard in Live Performance

Offering a complete range of dynamic microphones covering vocals, instrument and backline, Sennheiser's revolutionary Evolution Series answers every conceivable performance requirement. Combining over 50 years of microphone design experience with state of the art production and testing techniques, Evolution delivers the very highest possible standards of performance and construction at remarkably affordable prices.

In developing the Evolution series, Sennheiser listened to musicians and professional sound engineers to find out what kind of performance and pricing they were looking for. What they heard was that the cost of equipping a band with a full set of good mics was too high, that getting the right mic for the right job was more or less pot-luck and that there was little assurance as to quality at affordable price levels. Sennheiser's response was Evolution. A single range of quality microphones for every application, every style and type of voice and every instrument on stage or off.

- Rugged construction and component assembly designed for the rigors of touring, includes fully die cast zinc castings for all vocal microphones.
- Stunning new capsule design, effected through computer aided acoustic design and laser interferometry techniques.
- Advanced suspension and shock-mount techniques and acoustically engineered grills protect each mic from handling noise and impact, further improving performance.
- High feedback rejection pick-up patterns enable greater signal levels to be delivered before feedback occurs.
- Each capable of extremely high SPL handling (150db+) without distortion.
- Neodymium transducer magnets push output levels even higher, making it possible to balance signals against higher levels of on-stage amplification allowing higher levels of stage monitoring.

E 602 Cardioid Instrument Dynamic Microphone

Optimized for high sound pressure levels (160dB) and extended low frequency response, the E 602 is designed for use with bass drums, bass guitar cabs, tubas and other low frequency instruments. The E602 combines the latest lightweight high performance voice coil construction with a traditional large diaphragm capsule design to deliver very low bass response (down to 20Hz) and fast transient signals. Low frequency extension and mid band attenuation produces an ultra smooth pre-shaped signal enabling the mic to be used without corrective EQing, even on the most problematic bass signal sources. Frequency independent cardioid pick-up pattern ensures very high signal output before feedback and isolation from other on-stage signals—making it ideal for stage or studio use.

Kick-Pack

An off-the-shelf, promotional pack, the Kick-Pack is the ideal microphone kit for drummers. It includes an E602 microphone, weighted bass, kickstand, microphone pouch, M C 21N mic cable

Drum-Packs

Get everything you need to hit the stage, and save money too! Three cost-saving and popular Drum Pack configurations are available, and all come with a carrying case

SET 604A: three e604 mics
SET 604B: two e604 and one e602 mics
SET 604C: three e604 and one e602 mics

www.bhphotovideo.com
E 604  Cardioid Dynamic Drum Microphone
The space-saving compact E604 is ideal for low visibility, close miking techniques. Frequency response and cardioid pick-up pattern are optimized for drum sets and other percussion instrument miking—it also produces exceptional results on all forms of brass and woodwind. An integral stand mount screws directly onto mic stands and included clip attaches mic to rim of drum. Very high sound pressure level handling, in excess of 160dB, is combined with a balanced, clear, low distortion signal similar to a high-end studio condenser microphone. Lightweight voice coil provides extended high frequency and rapid transient response. With its tough reinforced glass fiber body, the E604 can take direct hits from drumsticks without flinching and still provide that ATTACK you’ve been looking for.

Quick Mount Drum Clamp for E 604 (MZH504) ........................................ 28.95
Swivel Joint for E 604 (MZJ504) ................................................................. 29.95

E 608  Clip-On Gooseneck Dynamic Instrument Mic
The world’s smallest dynamic microphone, with a full size sound quality. Ideal for almost invisible dip miking of woodwind, brass and drums. Newly developed clamp and gooseneck mounting enables the capsule to be positioned close to the signal source for high realism, high level output. Extensive damping and shock mounting isolates the capsule and signal from extraneous vibration, noise and impact. Humbucking coil protects against induced electrical interference. A high strength, reinforced glass-fiber casing protects the capsule from impact damage.

E 609  SILVER Supercardioid Dynamic Microphone
The e609 Silver is based on the legendary MD 409 microphone. Able to withstand high SPLs without distorting, the e609 Silver’s flat-profile capsule facilitates extremely close miking of guitar cabinets and is also suitable for drum miking, particularly toms. The e609 Silver’s super-cardioid design improves isolation in live sound reinforcement and recording applications while its increased output and wider frequency response improves performance. Neodymium magnet with boron keeps mic stable regardless of climate. Falcon ring produces consistent sound over time. Its sound inlet basket, made of refined steel, is distinguished by a unique silver address side.
E 815s Cardioid Dynamic Mic
The E815s is a rugged, great-sounding cardioid mic with a noiseless on/off switch, and it comes complete with an XLR-to-1/8” cable and 1/4” adapter. This is the most affordable way to get a mic that is perfect for multi-tracking, for use with digital recorders, and for use with karaoke systems and DJ mixers.

E 825s Cardioid Dynamic Mic
An entry level vocal and general purpose dynamic mic, the E825’s smooth sound, startling clarity and extended high frequency response give vocals a whole new ‘attitude’. A well-balanced frequency response delivers a warm, clear and transparent signal, while its cardioid pick-up pattern provides excellent feedback and spillage rejection. A hum-compensating cable reduces electrical interference, while a neodynum ferrous magnet with boron keeps the mic stable regardless of the climate. Ideal for general vocal and instrument miking and club PA. Rugged metal construction and internal damping isolates handling noise. Complete with silent on-off switch.

E 835/ E835s Cardioid Dynamic Mics
Quality vocal mic with performance with uniform frequency pick-up pattern that maintains signal quality when moving on and off axis during performance. Gentle presence boost to even tonal response ensures clarity and projection. Minimal proximity effect provides consistently clear bass end performance when singing closer to or further from capsule. Cardioid pick-up pattern provides good signal isolation and feedback rejection, enabling higher sound levels to be obtained. Metal construction and internal shock-mount system minimizes handling noise. Lead vocal stage mic, designed to perform under pressure. Also available with On/Off switch (835-S).

E 845/E 845s Super-Cardioid Dynamic Mics
High quality, powerful performance, vocal mic. Extended high frequency response and super-cardioid pick-up pattern for higher signal output, cuts through high on-stage sound levels. Smooth warm tonal response and full dynamic range, with presence lift for vocal clarity and projection. Consistent on/off axis and proximity response maintains sound quality with moving, providing greater on-stage freedom. Full metal construction and extensive suspension and shock-mounting minimizes handling noise and signal interference. High output performance microphone, offering power, clarity and projection. Also available with On/Off switch (845-S).

E 855 Super-Cardioid Handheld Dynamic Mic
Top-of-the-range, fully professional vocal mic utilizing the very best in dynamic mic technology to achieve new standards of quality and performance. Searing vocal reproduction is matched with bullet-proof construction. Extended dynamic range and assertive presence are achieved with a super-smooth frequency response, delivering the highest quality signal with maximum vocal projection and the lowest possible distortion. Extended high frequency response, combined with the super-cardioid pick-up pattern, enables the mic to handle the highest vocal levels without feedback. Full metal construction and sophisticated shock-mount suspension shields and protects the capsule in the most rigorous conditions.
### EVOLUTION SERIES SPECIFICATIONS

<table>
<thead>
<tr>
<th>Transducer Principal</th>
<th>EB155</th>
<th>EB255</th>
<th>EB35</th>
<th>EB45</th>
<th>EB55</th>
<th>EB65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern(s)</td>
<td>Cardioid</td>
<td>Cardioid</td>
<td>Cardioid</td>
<td>Super-Cardioid</td>
<td>Super-Cardioid</td>
<td>Electret Condenser</td>
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<tr>
<td>Frequency Response</td>
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<td>80 Hz to 15 kHz</td>
<td>40 Hz to 16 kHz</td>
<td>40 Hz to 16 kHz</td>
<td>40 Hz to 18 kHz</td>
<td>40 Hz to 20 kHz</td>
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<tr>
<td>Sensitivity, 1 kHz</td>
<td>1.5 mV/Pa</td>
<td>1.5 mV/Pa</td>
<td>2.7 mV/Pa</td>
<td>1.8 mV/Pa</td>
<td>1.8 mV/Pa</td>
<td>3 mV/Pa</td>
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<tr>
<td>Nominal Impedance</td>
<td>350 Ω</td>
<td>350 Ohms</td>
<td>350 Ω</td>
<td>350 Ω</td>
<td>600 Ω</td>
<td>200 Ω</td>
</tr>
<tr>
<td>Min Terminating Impedance</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
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<tr>
<td>Dimensions</td>
<td>1.9 x 7”</td>
<td>1.89 x 7.1”</td>
<td>1.89 x 7.1”</td>
<td>1.8 x 7.3”</td>
<td>1.8 x 7.3”</td>
<td>1.9 x 7.72”</td>
</tr>
<tr>
<td>Weight</td>
<td>11.6 oz.</td>
<td>11.64 oz.</td>
<td>11.6 oz.</td>
<td>11.64 oz.</td>
<td>11.64 oz.</td>
<td>11 oz.</td>
</tr>
</tbody>
</table>

**Supplied Accessories**: 1 protective pouch and a microphone clip

**Optional Accessories**: 21` XLR mic cable, windscreens, floor stand with boom arm

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**E 865 Condenser Vocal Mic**

The E865 represents the first condenser microphone in the acclaimed Evolution Series. A live performance, lead vocal microphone, the E 865 easily cuts through high on-stage levels by virtue of its detailed and natural 40 Hz-20 kHz reproduction and superb transient response. Its smooth super-cardioid polar pattern rejects feedback with low, off-axis coloration. The E 865 withstands sound pressure levels of up to 150 dB, and deftly suppresses pop noise. While it picks up the finest sonic nuances, the E 865 is at the same time rugged, benefiting from high-quality workmanship and a robust all-metal housing.

Includes pouch and mic clip.

---

**e-packs**

For added convenience, Sennheiser offers a variety of “e-packs” which consist of one Evolution mic, MZQ110 mic cable, and a microphone clip.

- **e-pack 825S** ............. $99.95
- **e-pack 835** ............. $109.95
- **e-pack 845** ............. $149.95
- **e-pack 855** ............. $199.95

**3-packs**

Evolution 3-packs include three evolution mics, three MZQ800 mic stand clips, and three mic pouches—all for the cost of two microphones!

- **three-pack 604** ........... $324.95
- **three-pack 825S** ......... $169.95
- **three-pack 835** ........... $199.95
- **three-pack 835S** .......... $199.95
- **three-pack 845** ........... $279.95
- **three-pack 845S** .......... $279.95
- **three-pack 855** ........... $359.95
**MD-421 II Dynamic Microphone**

The MD 421 II continues the tradition of the MD 421 which has been one of Sennheiser's most popular dynamic mics for over 35 years. The large diaphragm, dynamic element handles high sound pressure levels, making it a natural for recording guitars and drums. The MD 421 II’s full-bodied cardioid pattern, and five-position bass control make it an excellent choice for most instruments, as well as group vocals, or radio broadcast announcers. One listen and you’ll know why it’s a classic.

- Glass composite housing and hardened stainless steel basket—rugged and durable
- Five position bass roll-off switch compensates for proximity effect
- Effective feedback rejection
- Easy handling due to pronounced directivity
- Acoustic components are protected from dust and humidity
- Internal bass tubes—accurate low end response
- Handles exceptionally high sound pressure

**MD-431 II Speech and Broadcasting Mic**

Sennheiser’s best dynamic mic for live vocals just got better. The supercardioid MD 431 II has a custom-tailored frequency response to achieve added transparency. A nearly frequency-independent, polar pattern offers incredibly high gain before feedback and provides uncolored off-axis response. Its new rugged housing has a steel-mesh grille, a shock-suspended capsule, and a hum-bucking coil. It features a noiseless, magnetic reed on/off switch which is recessed in its handle, and internal electronics for refining proximity effect.

- Exceptionally good feedback rejection
- Shock mounted capsule—low sensitivity to handling noise
- Excellent for voice recognition
- On/off switch (reed switch) can be locked in the ‘on’ position if required
- Consistent polar pattern and proximity compensating electronics—excellent tonal consistency; integrated pop filter

**MD-441 Versatile Dynamic Mic**

The MD 441 is acknowledged as the most accurate and versatile dynamic mic available. It has a nearly textbook perfect supercardioid pattern, a five-position low frequency contour switch, a two-position high frequency switch, a critically dampened internal shock suspension, and a hum bucking coil. Perfect for vocals and virtually every instrument.

- Excellent feedback rejection
- Spring capsule mounting—low sensitivity to handling noise
- Five position bass roll-off switch—compensates for proximity effect
- Integral pop filter
- Brilliance (treble boost) switch—added speech intelligibility

### Classical Microphone Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Model</th>
<th>MD-421 II</th>
<th>MD-431 II</th>
<th>MD-441</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grey Foam Windscreen for MD 421 II</td>
<td>(MZW 421)</td>
<td>29.95</td>
<td>34.95</td>
<td>36.50</td>
</tr>
<tr>
<td>Grey Foam Windscreen for MD 441</td>
<td>(MZW 441)</td>
<td>29.95</td>
<td>34.95</td>
<td>36.50</td>
</tr>
<tr>
<td>Grey Foam Windscreen for MD 431 II</td>
<td>(MZW 432)</td>
<td>29.95</td>
<td>34.95</td>
<td>36.50</td>
</tr>
<tr>
<td>Lock-on Stand Adapter for MD 421</td>
<td>(MZA 421)</td>
<td>49.95</td>
<td></td>
<td></td>
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<tr>
<td>Lock-on Stand Adapter for MD 421</td>
<td>(MZA 421)</td>
<td>49.95</td>
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<tr>
<td>Shockmount Stand Adapter for MD 421</td>
<td>(MZA 421)</td>
<td>59.95</td>
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<tr>
<td>Quick Release Stand Adapter for MD 431</td>
<td>(MZA 431)</td>
<td>59.95</td>
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<tr>
<td>Clear Plastic Locking Stand Adapter for MD 441</td>
<td>(MZA 441)</td>
<td>59.95</td>
<td></td>
<td></td>
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<tr>
<td>Flexible Stand Adapter for MD 441</td>
<td>(MZA 441)</td>
<td>59.95</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pickup Pattern**

<table>
<thead>
<tr>
<th>Microphone</th>
<th>MD-421 II</th>
<th>MD-431 II</th>
<th>MD-441</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardioid</td>
<td>30 - 17 kHz</td>
<td>40 - 16 kHz</td>
<td>30 - 20 kHz</td>
</tr>
<tr>
<td>Supercardioid</td>
<td>2 mV/Pa ± 3 dB</td>
<td>2.2 mV/Pa ± 2.5 dB</td>
<td>1.8 mV/Pa ± 2 dB</td>
</tr>
<tr>
<td>Supercardioid</td>
<td>200 Ω</td>
<td>250 Ω</td>
<td>200 Ω</td>
</tr>
</tbody>
</table>

**Nominal Impedance**

<table>
<thead>
<tr>
<th>Microphone</th>
<th>MD-421 II</th>
<th>MD-431 II</th>
<th>MD-441</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 Ω</td>
<td>250 Ω</td>
<td>200 Ω</td>
<td></td>
</tr>
<tr>
<td>1000 Ω</td>
<td>1000 Ω</td>
<td>1000 Ω</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th>Microphone</th>
<th>MD-421 II</th>
<th>MD-431 II</th>
<th>MD-441</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.4 x 1.9 x 2”</td>
<td>8 x 2 x 1.3”</td>
<td>10.7 x 1.3 x 1.5”</td>
<td></td>
</tr>
</tbody>
</table>

**Weight**

<table>
<thead>
<tr>
<th>Microphone</th>
<th>MD-421 II</th>
<th>MD-431 II</th>
<th>MD-441</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 oz.</td>
<td>9 oz.</td>
<td>16 oz.</td>
<td></td>
</tr>
</tbody>
</table>
MD46 Handheld Dynamic ENG/EFP Microphone

Developed for NBC and the 2000 Sydney Olympics, the MD46 is a cardioid interview mic with studio quality. Unlike omni microphones that pick up everything equally, including background noise, the MD46 focuses on the subject, increasing clarity. However, the tendency for a cardioid mic to emphasize plosives makes them undesirable in the field. To eliminate this problem, Sennheiser put a double layer in the sound inlet basket to reduce the tendency for the microphone to emphasize plosives, enabling the MD46 to highlight the desired sound (optional windscreen is still available though, if needed).

- Features include a traditional long handle, wind attenuation and off-axis rejection
- Possesses an extended high-frequency response, warm lows, and a clean midrange.
- With low handling and wind noise, and the ability to eliminate vocal popping, it is the ideal interview tool for ENG work.
- Frequency response of 40Hz-18kHz allows the MD46 to be used in a pinch as an announcer or guest mic in remotes, auxiliary studios or at interview turrets.

MKH-418S Shotgun Microphone

The MKH 418S is a compact MS stereo shotgun microphone utilizing Sennheiser’s exclusive RF condenser microphone technology. The MKH 418S incorporates a mid capsule based on that of the legendary MKH 416 which is combined with a newly designed figure-of-eight side capsule. Its high constant articulation, excellent feedback rejection and functional versatility make the MKH 418S a superb all-round cost-effective choice for film, television, and multi-media applications.

MKE-300 Camcorder Microphone

The MKE-300 complements the excellent video capabilities of DV camcorders with the superior audio they deserve. The electret condenser element delivers sonic clarity and high output. Ideally suited for mounting on camcorders due to its integrated shoe assembly, the MKE-300 is compact and extremely lightweight (2.1 oz.). Given its super-cardioid polar pattern, the MKE-300 has the ability to pick up only those sounds that correspond to the scene being filmed and rejects disturbing ambient noise. This high directivity also attenuates the camcorder’s autofocus and zoom motors. The mic’s suspension mount assembly and integrated windscreen virtually eliminates handling and wind noise. Includes a mini cable.

<table>
<thead>
<tr>
<th></th>
<th>MD46</th>
<th>MKH-418S</th>
<th>MKE-300</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pickup Pattern</strong></td>
<td>Cardioid</td>
<td>M: super cardioid/lobar; S: 8</td>
<td>Supercardioid/lobar</td>
</tr>
<tr>
<td><strong>Frequency Response</strong></td>
<td>40Hz - 18kHz</td>
<td>40Hz - 20kHz</td>
<td>150Hz - 17kHz</td>
</tr>
<tr>
<td><strong>Sensitivity (1kHz)</strong></td>
<td>2.0 mV/Pa ±2.5dB</td>
<td>M: 25 mV/Pa (-32 dBV); S: 10 mV/Pa (-40 dBV)</td>
<td>16 mV/Pa ±2.5 dB</td>
</tr>
<tr>
<td><strong>Nominal Impedance at 1 kHz</strong></td>
<td>350Ω</td>
<td>1000Ω</td>
<td>2000Ω</td>
</tr>
<tr>
<td><strong>Min Terminating Impedance</strong></td>
<td>1000Ω</td>
<td>1000Ω</td>
<td>2700Ω</td>
</tr>
<tr>
<td><strong>Dimensions; Weight</strong></td>
<td>1.9 x 9.8&quot;; 12.7oz.</td>
<td>.75 x 11&quot;; 7.7 oz.</td>
<td>9.1 x 2.6 x 1.96&quot;; 2.1 oz.</td>
</tr>
</tbody>
</table>
SENNHEISER

K6 SERIES

Modular Electret Condenser Microphone System

The K6 Series is a modular condenser microphone system of exceptionally high quality designed to bring uncompromised studio quality sound and ruggedness to the broadcast and field recording markets. Available with a wide variety of interchangeable modules for different powering arrangements, polar patterns, and capsule sizes, the K6 System provides a flexible tool for all recording and sound reinforcement work.

At the heart of the K6 series is the K6 power supply. The K6 is the backend of the multimike system and accommodates a balanced, low impedance 3-pin XLR output connector. The modular design of the K6 power supply allows you to quickly convert from any one of six microphone capsules simply by unscrewing the current capsule from the K6 and replacing it with another. Each capsule has a different polar pattern making the K6 series flexible enough for any situation. Choose from omni-directional to highly directional shotgun mics suitable for boom pole and camera mounting as well as a lavalier capsule ideal for on air talent and live theater applications. A K6 Power Module plus a few mic capsules gives you the flexibility that would otherwise require investing in a number of individual mics.

K6/K6P Powering Modules

The heart of the system, the K6 Module supplies power to any capsule in the series. It can run for 150 hours on a single AA battery, or can be used with 12 to 48v phantom power (AA battery doesn’t drain while phantom-powering). The K6 features an on/off switch with LED battery status indicator; and a bass roll-off switch which will compensate for proximity effect in close miking, or for wind rumble in field recording.

The K6P phantom powering module provides an alternative to the K6 that is 42mm shorter and 15 grams lighter, while offering the same integrated bass roll-off switch. Ideal for fixed installations and applications on camera or on stage where size is a factor and phantom power availability is not a concern.

Omni-Directional Lavalier Capsules

MKE2-60

The industry-standard for tv and theatrical production, this sub-miniature omni lavalier is unobtrusive and easy to conceal. Its accurate frequency response reproduces natural, uncolored sound. An extremely thin low mass diaphragm exhibits extraordinary transient response. The stranded, stainless-steel reinforced cable provides maximum tensile strength and low contact (clothing) noise. May also be used as a clip-on instrument mic.

MKE102-60

Similar in size to the MKE2 with several significant differences. The capsule head can easily be detached for use with straight or right angle cables. Highly immune to moisture, it is a natural for theater or outdoor productions. Frequency response is optimized for speech pickup with its 4 to 6 dB rise at 8kHz. Extremely low self-noise makes it ideal for broadcast as well.

MKE104-60

The MKE104 is the same as the MKE102 except it is a cardioid mic, which makes it ideal for applications that require isolation of the source. Use in live musical performances and for reporting when there are several announcers covering a scene with different audio feeds.

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The K6 Series ME capsules exhibit exceptionally high sensitivity, great “reach” characteristics, and very low self-noise. The result is a versatile line, from omnidirectional to long shotgun models, that offers extremely natural sound reproduction for digital recording and other critical applications.

**ME-62 Omni-Directional Capsule**

Very broad and smooth frequency response, without proximity effect. The ME62’s low handling noise and integrated pop screen make it ideal for interviews and live recording. Great for the recording of ambient sounds. Frequency response: 20Hz-20kHz ±3dB ............................................139.95

**ME-64 Cardioid Capsule**

Feedback resistant due to the ME-64’s well defined directional polar pattern as well as its extended frequency response, make this microphone capsule ideal for use in sound reinforcement or recording in noisy environments. Frequency response: 50Hz - 20kHz ± 2.5 dB ..........................159.95

**ME-65 Super Cardioid Capsule**

The ME-65 is a supercardioid handheld microphone especially suited to vocal and speech applications. It has a matte black, anodized, scratch-resistant finish that will look great on camera. The linear directivity across its entire frequency range will ensure excellent feedback rejection. Can handle extremely high sound pressure levels, has high sensitivity, a wide frequency range and integrated pop filter. Frequency response: 40Hz - 20kHz ± 2.5 dB ..........................179.95

**ME-66 Short Shotgun Capsule**

The ME66 offers classic Sennheiser shotgun mic sound, extremely high sensitivity, and very low-self-noise, resulting in unprecedented “reach” characteristics for a mic that can be powered by AA batteries. Extremely smooth frequency response provides for neutral, uncolored sound in the low- and mid-range frequencies and a gentle boost in high frequencies, for increased intelligibility. Great for interviews in crowded situations, as a camera microphone for ENG, for unobtrusive theater sound reinforcement and as a podium mic. Frequency response is 50Hz - 20kHz ± 2.5 dB ............................................209.95

**ME-67 Long Shotgun Capsule**

The ME-67 is a long shotgun mic capsule designed primarily for capturing low-level sounds. Its extremely directional design brings distant sound sources into close range, with the extremely tight focus of the on-axis signal. As with the ME66, its frequency response has been optimized for a natural presentation, with good articulation of high frequencies. With a precise combination of high sensitivity and low self-noise, the ME67 is outstanding in difficult acoustic environments. Frequency response: 40Hz - 20kHz ± 2.5 dB ..........................239.95
MKH SERIES

RF Condenser Microphones
MKH condenser mics represent the perfect fusion between exceptional sound and precision engineering, and have long been the choice of the most demanding professionals in the broadcast, theatrical, and motion picture industries. They are specifically well-suited for use with digital recording devices, which reveal the sonic limitations of less accurate microphones. Their extremely transparent sound, high sensitivity, and excellent signal-to-noise ratio are perfectly complemented by their exceptionally low inherent self-noise, extremely low distortion, and unusually flat, linear frequency response.

Their lightweight, durable, and weather-resistant construction makes them suitable for outdoor applications. The MKH Series consists of eight microphones with different pickup patterns, and are tonally consistent across the entire range because of their lack of coloration. In every MKH mic, the capsule is part of a tuned circuit in a radio frequency system. This makes all of them highly immune to humidity, and is responsible for their exceptionally low self-noise. In addition, their symmetrical push-pull capsule design incorporates optimum resistive loading, which virtually eliminates intermodulation distortion.

**MKH-20 Omni-Directional**
Low distortion push-pull element, transformerless RF condenser, flat frequency response, diffuse/near-field response switch (6 dB boost at 10 KHz), switchable 10dB pad to prevent overmodulation. Handles 142dB SPL with a high output level. Ideal for concert, Mid-Side (M-S), acoustic strings, brass and wind instrument recording.

**MKH-30 Figure-Eight**
The symmetrical transducer design of the MKH-30 produces an unusually wide and smooth frequency response. Particularly suited to soloists and small instrumental groups, it can also serve as an ‘S’ or side microphone in M-S stereo applications. As a support microphone it is particularly useful in the effective suppression of sounds from adjacent sound sources.

**MKH-40 Cardioid**
Highly versatile, low distortion push-pull element, transformerless RF condenser, high output level, transparent response, switchable proximity equalization (-4dB at 50Hz) and pre-attenuation of 10dB to prevent overmodulation. Excellent results have been achieved in vocal applications when used with a pop screen. Recommended for most situations, including digital recording, overdubbing vocals, percussion, acoustic guitars, piano, brass and string instruments, mid-side (M-S) stereo, and conventional X-Y stereo.

**MKH-50 Super-Cardioid**
The super-cardioid MKH-50 offers a higher attenuation of side and rear sounds than the cardioid MKH-40. It is principally designed for use as a soloist’s or spot microphone for applications requiring a high degree of side-borne sound muting and feedback rejection while maintaining the integrity of on- and off-axis sound fields.

**MKH-60 Super-Cardioid/Lobe**
Short interference tube RF condenser, lightweight metal alloy, transformerless, low noise, symmetrical capsule design, smooth off-axis frequency response, switchable low cut filter (-5dB at 100 Hz), high frequency boost (+5dB at 10kHz) and 10dB attenuation. Handles very high SPL (135 dB). Widely used in film, theater and TV productions. Ideal for broadcasting, sports recording and interviews in crowded or noisy environments. Excellent for studio voice-overs.

**MKH-70 Super-Cardioid/Lobe**
Extremely lightweight, rugged, long shotgun. Low distortion push-pull element, transformerless, low noise, switchable presence (+5dB at 10kHz), low cut filter (-5dB at 50Hz), and 10dB pad. Handles 133dB SPL with excellent sensitivity and high output level. Ideal for video/film studios, theaters, sporting events, and nature recordings.

**MKH-800 Variable Pattern Condenser Microphone**
Superior microphone for any recording application, the MKH-800 offers high clarity and the absolute minimum coloration. Frequency response on the high-end extends to 50kHz—far beyond the audible threshold—resulting in superior transient response. In addition to five switchable pick-up patterns (omni, wide cardioid, cardioid, supercardioid and figure-8), it features include a built-in LED for on-axis alignment, switchable treble emphasis, roll-off filter and pre-attenuation pad.

**MKH-416P48-U3 Super-Cardioid/Lobe**
Transformerless, RF condenser designed as a combination of pressure gradient and interference tube microphones. Very good feedback rejection, low proximity effect, 128dB SPL. Rugged and resistant to changing climate conditions. Ideal for boom, fishpole, and camera mounting as a long-distance microphone for video, film, and studio recording. An excellent ENG mic for reporters or as a podium or lectern microphone.
**Sennheiser MKH Series Accessories**

**K6 Series Windscreen**
Standard foam windscreens reduce wind and popping noise.
- MZW-64 for M E-62, M E-64, Grey .................................. 22.95
- MZW-66 for M E-66, Grey ........................................ 36.95
- MZW-67 for M E-67, Grey ........................................ 42.95

**K6 Series Pro Windscreen**
Black velour coated foam windscreens offer even greater protection for reducing wind and popping noise.
- MZW-64PRO for M E-62/64 .................................. 29.95
- MZW-65PRO for M E-65 ........................................ 64.95
- MZW-66PRO for M E-66 ........................................ 64.95
- MZW-67PRO for M E-67 ........................................ 96.50

**MKH Series Windscreen**
Open cell foam material represents the best compromise between minimal effects on the frequency response and maximum protection against wind and pop noise.
- MZW-41 for MKH-20/40, grey ................................... 8.95
- MZW-61 for MKH-60, black ..................................... 82.95
- MZW-71 for MKH-70, black ..................................... 129.95
- MZW-415 for MKH-416, grey ................................... 42.95

**K6 Series Mic Adapters**
- MZQ6 Camera Mount ........................................ 38.95
- MZQ200 Stand Mount ......................................... 28.50
- MZS6 Shock Mount ........................................... 36.95
- Elastic Suspension Shock Mount (MZSCAM) With shoe mount for camera use ........................................ 39.95

**MZA14-P48 Phantom Power Supply**
Battery operated, 48v phantom power supply with XLR balanced input/output as well as battery test, -10/-20dB pad and 80/140Hz high pass filter controls ........................................ 383.95

**MZS20-1 Pistol Grip Shock Mount**
MZS20-1 Combination shock mount, pistol grip and stand adapter for M E-66 and M E-67 as well as MKH Series Microphones
- Required for mounting in MZW "blimp" windscreen
- May be boom or stand mounted. Requires MZA-216 adapter (included).
- Includes interchangeable mike clips for MKH-416/MKH-816, or MKH-20 through MKH-70

$259.95

**Blimp Windshields** *(Require MZS20-1)*
- MZW20-1: Rigid "blimp" windscreen for MKH-20/30/40/50 ................................................................. 229.95
- MZW60-1: Rigid "blimp" windscreen for M E66/MKH-416/MKH-60 ................................................................. 229.95
- MZW70-1: Rigid "blimp" windscreen for M E-67/MKH-70 ................................................................. 269.95

**Long Hair Wind Muffs**
Long hair wind muff greatly reduce high velocity wind-noise when used with MZW series blimp windshields and MZS-20-1 pistol grip/shock mount.

**Adapters and Clips**
- Piggyback Mic Holder (MZD30) For any combination of two MKH 20, 30, 40 or 50 ........................................... 54.95
- Swivel-Mount Yoke (MZG415-3) For MZS shock mounts ........................................... 48.95
- Double Joint Flexible Stand Adapter (MZQ31) Fits MKH 20, 30, 40, and 50 ........................................... 69.95

**Shock Mounts**
- Elastic Suspension Shock Mount (MZS40) For MKH 20, 40, and 50 ........................................... 169.95
- MZH20-1: Requires MZW 20-1 "blimp" windscreen (for MKH-20/30/40/50) ........................................... 159.95
- MZH60-1: Requires MZW 60-1 "blimp" windscreen (for M E66/MKH-416/MKH-60) ........................................... 149.95
- MZH70-1: Requires MZW70-1 "blimp" windscreen (for MKH-70) ........................................... 169.95

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PG48 and PG58 Cardioid Dynamic Speech and Vocal Microphones

High performance dynamic cardioid microphones tuned specifically for vocal applications, the PG48 is designed for spoken word applications, while the rugged PG58 is tuned to accentuate the clarity of lead and back-up vocals. Both feature a tailored frequency response that is smooth and extended. Their cardioid polar pattern picks up the most sound from in front of the microphone and some sound from the sides. Less susceptible to feedback in high volume settings.

- Dynamic cartridge has a simple, rugged coil. Handles extreme volume levels without distortion.
- Cartridge includes a neodymium magnet for high output level
- Internal shock mount for reduced handling noise (PG58 only)
- Durable metal construction
- On/off switch for onstage control
- Steel mesh ball grille with integral “pop” filter reduces explosive breath sounds and wind noise
- Includes 15´ cable, break-resistant mic clip and storage bag
- Cardioid polar pattern picks up the most sound from in front of the microphone and some sound from the sides. Less susceptible to feedback in high volume settings.
- Internal shock mount for reduced handling noise
- Durable metal construction
- Dynamic cartridge has a simple, rugged coil. Handles extreme volume levels without distortion.
- Cartridge includes a neodymium magnet for high output level. (PG57)
- Hardened steel mesh tapered grille that resists wear and abuse (PG57)
- On/off switch for onstage control
- Condenser cartridge has a lightweight, sensitive diaphragm. Precisely and smoothly captures sound nuances. Powered by AA battery or phantom power supply. (PG81)
- They include 15´ cable, break-resistant mic clip and storage bag

PG57 and PG81 Cardioid Dynamic and Cardioid Instrument Microphones

A versatile microphone for amplified or acoustic instruments, the PG57 is a cardioid dynamic mic with a tailored frequency response that is smooth and extended. Tuned specifically for instrument applications. A sensitive, flat response microphone ideal for acoustic instruments, the PG81 is a cardioid condenser mic with a flat frequency response that is wide and uniform. Provides consistent sensitivity through the frequency range.

- Cardioid polar pattern picks up the most sound from in front of the microphone and some sound from the sides. Less susceptible to feedback in high volume settings.
- Internal shock mount for reduced handling noise
- Durable metal construction
- Dynamic cartridge has a simple, rugged coil. Handles extreme volume levels without distortion. Cartridge includes a neodymium magnet for high output level. (PG57)
- Hardened steel mesh tapered grille that resists wear and abuse (PG57)
- On/off switch for onstage control
- Condenser cartridge has a lightweight, sensitive diaphragm. Precisely and smoothly captures sound nuances. Powered by AA battery or phantom power supply. (PG81)
- They include 15´ cable, break-resistant mic clip and storage bag
When you buy a Shure microphone you are buying uncompromised precision, performance, ruggedness and reliability in "real world" usage. To back it up, Shure has the most stringent quality assurance testing program in the business. Before it can bear the Shure name, a mic must be able to withstand extended exposure to extreme temperatures (-20° to 165°F) and humidity (100% at room temperature), ultraviolet rays, salt spray, alcohol, sand and water. Also, violent vibrations, “drop tests” (repeated drops from six feet) and ten days of repeated cycling between simulated arctic and tropical environments. If the mic doesn't work after all this, it's not a Shure. This dedication has made Shure “The Sound of the Professionals Worldwide” for decades. And that's why you'll find Shure microphones virtually everywhere—on stages, lecterns, remote broadcast locations and production sets all over the world.

PG52 and PG56 Drum Mics

Cardioid dynamic mics with a tailored response, the PG52 is a high-performance microphone tuned to capture low-end punch (kick drum, bass amp) while the PG56 is a compact drum microphone for close miking of snare drums, rack/floor toms and percussion instruments.

- Cardioid polar pattern picks up the most sound from in front of the mics and some sound from the sides. Less susceptible to feedback in high volume settings
- Tailored frequency response is smooth and extended
- Dynamic cartridge has a simple, rugged coil. Handles extreme volume levels without distortion
- Cartridge includes a neodymium magnet for high output level
- Durable metal construction
- Integral stand mount
- Internal shock mount for reduced handling noise
- Hardened steel mesh tapered grille that resists wear and abuse
- They include 15’ cable and bag

PGDMK4
Drum Mic Kit

An essential drum mic package. The PGDMK4 drum mic kit includes three PG56 snare/tom microphones, one PG52 kick drum mic, three A50D drum mounts, four 15’ XLR-XLR cables and a durable carrying case.

PGDMK6
Drum Mic Kit

A complete drum mic package. The PGDMK6 drum mic kit includes three PG56 snare/tom microphones, one PG52 kick drum microphone, two PG81 instrument mics, three A50D drum mounts, six 15’ XLR-XLR cables and a durable carrying case.

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>PG48</th>
<th>PG58</th>
<th>PG57</th>
<th>PG81</th>
<th>PG52</th>
<th>PG56</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microphone Element Type</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Condenser</td>
<td>Dynamic</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Frequency Response (Hz)</td>
<td>70 to 15k</td>
<td>60 to 15k</td>
<td>50 to 15k</td>
<td>40 to 18k</td>
<td>30 to 13k</td>
<td>50 to 15k</td>
</tr>
<tr>
<td>Output Impedance @1000Hz</td>
<td>600 Ω</td>
<td>300 Ω</td>
<td>200 Ω</td>
<td>600 Ω</td>
<td>300 Ω</td>
<td>200 Ω</td>
</tr>
<tr>
<td>Sensitivity @1000Hz*</td>
<td>-52 dBV/Pa</td>
<td>-53 dBV/Pa</td>
<td>-53 dBV/Pa</td>
<td>-48 dBV/Pa</td>
<td>-55 dBV/Pa</td>
<td>-56 dBV/Pa</td>
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<tr>
<td>Electromagnetic Hum Sensitivity**</td>
<td>22 dB</td>
<td>26 dB</td>
<td>26 dB</td>
<td>-7 dB</td>
<td>25 dB</td>
<td>26 dB</td>
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<tr>
<td>Weight Net</td>
<td>11.1 oz.</td>
<td>11.3 oz.</td>
<td>11.5 oz.</td>
<td>8.8 oz.</td>
<td>16.8 oz.</td>
<td>11.4 oz.</td>
</tr>
</tbody>
</table>

*1 Pascal = 94 dB SPL  **equivalent SPL in a 1 milloersted field (60 Hz)
SM48/SM48s Dynamic Cardioid Vocal Microphones

The SM 48 is a unidirectional dynamic microphone designed for professional sound reinforcement, studio recording, and broadcasting applications. It maintains a true cardioid pattern throughout the frequency range, ensuring high gain before feedback and rejection of off-axis sound. Perfect for singers on the way up, the tailored frequency response is ideal for vocals. A presence rise brightens mid-range performance, and a low frequency rolloff controls proximity effect. Includes a shock mounted cartridge, a steel mesh grille, and an integral “pop” filter. The SM 48S adds a lockable On/Off switch.

- Cardioid pickup pattern rejects off-axis sound and provides superior gain before feedback
- Shock-mounted cartridge for exceptional ruggedness and reduced handling noise
- Frequency response tailored for vocals with brightened mid-range. Low-frequency bass rolloff controls proximity effect

SM 48 Dynamic Microphone
SM 48S Dynamic Microphone with on/off switch

SM-57 Dynamic Cardioid Vocal/Instrument Mic

A true classic, the SM -57’s outstanding performance and diversity make it the “workhorse” of stages and studios worldwide. Ideal for musical instrument pickup or for vocals, the SM -57’s carefully contoured frequency response means clean, well-defined instrument reproduction and rich, warm vocal pickup on lecterns or stages. Extremely effective cardioid pickup pattern isolates the main sound source while minimizing background noise. In the studio use it to record drums, guitar, and woodwinds. It is also used on the podium of the U.S. President for over 30 years.

- Contoured frequency response for clean, instrumental reproduction and rich vocal pickup
- Professional-quality reproduction for drum, percussion, and instrument amplifier miking
- Ideal for narration/dialogue, vocal music and rhythm pickups
- Unusually effective cardioid pattern isolates the main sound while minimizing reflections caused by poor studio or location acoustics and background noise
- Shock-mounted cartridge reduces mic handling noise and mic stand rumble
- Extremely durable under the heaviest use
- Frequency response: 40 to 15k Hz
- Designed for both field and studio use — hand-held or on a stand. Includes a break-resistant swivel adapter that rotates 180°

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>SM 48</th>
<th>SM 57</th>
<th>SM 58</th>
<th>SM 87 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response (Hz)</td>
<td>55 to 14k</td>
<td>40 to 15k</td>
<td>50 to 15k</td>
<td>Condenser</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Condenser</td>
</tr>
<tr>
<td>Rated Impedance</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
</tr>
<tr>
<td>Self Noise</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>24 dB</td>
</tr>
<tr>
<td>Maximum SPL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>140.5 dB</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>115.5 dB</td>
</tr>
<tr>
<td>Recommended Windscreen</td>
<td>A58WS</td>
<td>A2WS</td>
<td>A58WS</td>
<td>A85WS</td>
</tr>
</tbody>
</table>
SM SERIES PERFORMANCE MICROPHONES

SM-58 Dynamic Cardioid Vocal Microphone
The SM 58 is a unidirectional (cardioid) dynamic vocal microphone designed for professional vocal use in live performance, sound reinforcement, and studio recording. Cardioid pickup pattern isolates the main sound source while minimizing unwanted background noise. In addition, it has a highly effective, built-in spherical filter that minimizes wind and breath “pop” noise. The SM 58 has a tailored vocal response for a sound which is a world standard. Rugged construction, a proven shock mount system, and a steel mesh grille ensure that even with rough handling, the SM 58 will perform consistently. Outdoors or indoors, singing or speech – the SM 58 is the overwhelming choice of professionals worldwide.

- Shock-mounted cartridge reduces mic handling noise and mic stand rumble
- Designed for both field and studio use — hand-held or on a stand. Includes slip-in swivel adapter
- Self-contained spherical filter controls explosive breath sounds (“pop”) and wind noise in outdoor locations

SM-86/SM-87A Cardioid/Supercardioid Condenser Vocal Microphones
Ideal for professional use in live performance with stage or personal in-ear monitors, the SM -86 is an extremely rugged microphone designed to withstand the rigors of touring while delivering studio-quality sound. The tailored frequency response of the SM-86 reproduces vocals with clarity. A cardioid pickup pattern isolates the main sound source while minimizing unwanted background noise. The built-in three-point shock mount minimizes handling noise, and a two-stage pop filter reduces wind and breath “pop” noise. The choice of the world’s top entertainers, the SM 87A features a smooth frequency response that is tailored for warm, rich vocal reproduction. Supercardioid polar pattern permits high gain without feedback and rejects unwanted sounds. A three-stage wind/pop filter minimizes breath noise and an excellent internal shock mount minimizes mic stand rumble and handling noise.

**SM-86 Features**
- Combines the ruggedness of Shure’s SM line with the studio quality audio of a Shure condenser— the first model to join the SM line in over 10 years.
- Cardioid polar pattern and a wide frequency response of 50 Hz to 18 kHz. The mic additionally delivers high gain-before-feedback and a tailored frequency response for a clear reproduction of vocals.
- Equipped with an integral two-stage windscreen and pop filter
- Built-in, three-point shock mount virtually eliminates stand and handling noise
- Housed in a rugged, silver-colored, enamel-painted enclosure incorporating a steel-mesh grille.
- Requires phantom power for operation

**SM-87A Features**
- Flat frequency response for greater gain before feedback
- Low-frequency roll-off reduces low-frequency rumble and handling noise and compensates for proximity effect
- Low RF and magnetic hum susceptibility
- Low distortion output and wide dynamic range for a variety of load impedances
- Operates on 11 to 52v DC phantom power

SM-58 Features
- Unusually effective cardioid pickup pattern minimizes background noise and undesirable effects of studio and location acoustics. Rear and side rejection uniform to very low frequencies and completely symmetrical about microphone axis

SM-58C
- without a cable

SM-58S
- with on-off switch, no cable

SM-58SCN
- with 25’ XLR cable

SHURE
MICROPHONES
ORDER & INFO. (212) 444-5088 • FAX: (212) 239-7770 (800) 947-7008
1-800-875-6951 • www.bhphotovideo.com
Shure’s BETA series includes ten premium microphones—some of which have proven legendary performance. The BETA series’ outstanding responsiveness to vocals and instruments, specifically their maximum isolation from other sound sources and minimum off-axis coloration, have made them the most respected and widely used microphones in the world. For example, the Beta 58A is unequivocally the best dynamic mic for demanding live vocal applications while the Beta 57A excels in instrument miking applications. They both employ a super-efficient neodymium magnetic circuit design that provides maximum output voltage for improved S/N ratio. All Beta Series mics offer Shure reliability for years of trouble-free performance.

**Beta 57A • Beta 58A**

**Instrument and Vocal Dynamic Supercardioid Microphones**

Designed for professional sound reinforcement and project studio recording, the high output Beta 57A provides optimal warmth and presence making it excellent for acoustic and electric instruments including drums, guitar amplifiers, brass and woodwinds, as well as for vocals. Grille design lets you take better advantage of proximity effect.

The Beta 58A is a high-output dynamic vocal mic designed for professional sound reinforcement and project studio recording. The Beta 58A has a shaped frequency response that is ideal for close-up vocals. And the superb performance of this mic is not affected by rough handling because of its rugged construction, pneumatic shock mount system, and hardened steel mesh grille. Typical applications include lead vocals, backup vocals and speech.

Both the Beta 57A and Beta 58A maintain a true supercardioid pattern throughout their frequency range. This ensures high gain before feedback, maximum isolation from other sound sources, and minimum off-axis tone coloration. Both also incorporate a Neodymium magnet for high signal-to-noise ratio output, and an advanced electro-pneumatic shock mount design to effectively minimize transmission of handling or stand noise.

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>Beta 57A</th>
<th>Beta 58A</th>
<th>Beta 87A</th>
<th>Beta 87C</th>
<th>Beta 53</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polar Pattern</td>
<td>Dynamic</td>
<td>Dynamic</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Condenser</td>
</tr>
<tr>
<td>Frequency Response (Hz)</td>
<td>50 to 16k</td>
<td>50 to 16k</td>
<td>50 to 20k</td>
<td>50 to 20k</td>
<td>20 to 20k</td>
</tr>
<tr>
<td>Rated Impedance</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
</tr>
<tr>
<td>Output Level Sensitivity</td>
<td>-51 dBV/Pa</td>
<td>-51 dBV/Pa</td>
<td>-54 dBV/Pa</td>
<td>-51 dBV/Pa</td>
<td>-55 dBV/Pa</td>
</tr>
<tr>
<td>Maximum SPL</td>
<td>—</td>
<td>—</td>
<td>142 dB</td>
<td>139 dB</td>
<td>143 dB</td>
</tr>
<tr>
<td>Self Noise</td>
<td>—</td>
<td>—</td>
<td>25 dB</td>
<td>22 dB</td>
<td>—</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>—</td>
<td>—</td>
<td>69 dB</td>
<td>72 dB</td>
<td>54 dB</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>—</td>
<td>—</td>
<td>117 dB</td>
<td>117 dB</td>
<td>103 dB</td>
</tr>
<tr>
<td>Recommended Windscreen</td>
<td>A57AWS</td>
<td>A58WS Series</td>
<td>A58WS Series</td>
<td>A58WS Series</td>
<td>—</td>
</tr>
</tbody>
</table>

1 Pa = 94 dB SPL  
2 At 1kHz (0.25% THD, 1000 ohm load)  
3 Typical, A-weighted  
4 At 94 dB SPL

**Beta 57A**

- Tailored frequency response captures drums, guitars, vocals, and horns with studio quality sound
- Hardened steel mesh grille facilitates use of proximity effect and resists wear and abuse

**Beta 58A**

- Wide and smooth frequency response adds extra clarity
- Humbucking coil permits use in strong hum fields produced by lighting
- Plug element pins are gold plated for durable and low-noise transfer

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**Beta 87A • Beta 87C**

**Supercardioid & Cardioid Condenser Vocal Mics**

The choice of performers and audio technicians around the world, the Beta 87A and Beta 87C are premium quality vocal microphones with superb accuracy, detail, and rich vocal production. Used in professional sound reinforcement, broadcasting, and studio recording applications, they combine superb performance with the ruggedness required for touring and field production.

The Beta 87A (supercardioid) and Beta 87C (cardioid) provide maximum isolation while offering high gain before feedback. Both feature a controlled low-frequency roll-off that compensates for proximity effect and prevents the “boomy” sound often associated with close-up use. Ideal for live sound and music production, they maintain performance characteristics even at very high sound pressure levels (SPL). Additional features include improved shock mounting and a hardened, dent-resistant steel mesh grille with a built-in pop filter.

**They Both Feature**

- Superior gain before feedback
- Low-frequency roll-off compensates for proximity effect
- Advanced cartridge shock-mount system reduces handling noise and absorbs mechanical shocks
- Very low susceptibility to RFI and electromagnetic hum
- Phantom powered (11-52v DC)
- Built-in three-stage pop filter minimizes breath pop and wind noise
- High S/N ratio of 69dB (Beta 87A) and 72dB (Beta 87C)
- Maximum SPL of 142dB (Beta 87A) and 139dB (Beta 87C)
- Wide dynamic range (117dB) and low distortion characteristics.
- Thick handle for a comfortable feel when hand-held. They include a break-resistant swivel adapter
- Shure ruggedness and reliability

**Beta 54**

Designed for active professional sound applications, the Beta 54 Headworn Vocal Mic provides incredible sound quality in an impressively light and inconspicuous design. The Beta 54 features an extended frequency response, omnidirectional polar pattern, and optimized sensitivity perfect for close microphone placements.

- Adjustable headband, detachable boom mount, and flexible wire frame for maximum comfort and optimum mic placement
- Comfortable earpieces made with soft, latex-free “Dynaflex”
- Corrosion resistant and easy-to-clean
- Interchangeable frequency response cap (two types included) can be replaced if ever clogged by sweat or make-up
- Ideal for use in theatre, event production, trade shows, and seminars

**FEATURES**

- **Beta 87A**
  - Only
  - The Beta 87A's supercardioid pattern provides maximum isolation from other vocalists or instruments while offering minimal off-axis coloration and high gain before feedback. It has an exceptionally smooth frequency response with gradual presence rise that brighten the upper midrange.

- **Beta 87C**
  - Only
  - The Beta 87C maintains its cardioid pattern throughout its frequency range, ensuring maximum isolation from other sound sources and high gain before feedback. Vocalists who use in-ear monitor systems will appreciate how effectively the Beta 87C rejects ambient sound from the rear. Exceptionally smooth, wide frequency response includes a slight presence rise for a warm, natural sound.

- **They Both Feature**
  - Adjustable headband, detachable boom mount, and flexible wire frame for maximum comfort and optimum mic placement
  - Comfortable earpieces made with soft, latex-free “Dynaflex”
  - Corrosion resistant and easy-to-clean
  - Interchangeable frequency response cap (two types included) can be replaced if ever clogged by sweat or make-up
  - Ideal for use in theatre, event production, trade shows, and seminars
  - Built-in three-stage pop filter minimizes breath pop and wind noise
  - High S/N ratio of 69dB (Beta 87A) and 72dB (Beta 87C)
  - Maximum SPL of 142dB (Beta 87A) and 139dB (Beta 87C)
  - Wide dynamic range (117dB) and low distortion characteristics.
  - Thick handle for a comfortable feel when hand-held. They include a break-resistant swivel adapter
  - Shure ruggedness and reliability

**WBH 54B** Black, with detachable boom mount and flexible wire frame

**WBH 54Bx** Black, for wireless use

**WBH 54T** Tan, with detachable boom mount and flexible wire frame

**WBH 54Tx** Tan, for wireless use
Beta 98 Miniature Supercardioid Condenser Mic
For toms, snares and percussion instruments, no other mic compares to the Beta 98. A versatile, high performance mini-condenser microphone, the Beta 98 excels at professional sound reinforcement or recording. High maximum sound pressure level (SPL) of 160 dB makes it ideal for a variety of acoustic instruments, including drums, percussion, piano, reed, wind, and string instruments. It can also be used for amplified guitars. The Beta 98 has an ultra-uniform supercardioid pickup pattern that provides high gain before feedback and excellent rejection of unwanted noise. It also includes an in-line preamplifier that accepts 48v DC phantom power. Finally, An optional cardioid cartridge is also available, allowing you to easily adapt the mic to different applications.

The A98D drum mount has a specially designed gooseneck that allows the microphone to be positioned freely, yet holds it securely in place once the ideal placement has been found.
The hardware has been redesigned for quicker, more secure, rim-mounting without the need for a drum key.
Flexible gooseneck lets you position the mic in practically any configuration, so you get a virtually unlimited choice of sound options. Its unobtrusive design and compact size help the Beta 98D/S reduce stage clutter to an absolute minimum.

The Beta 98 is available in two variations: Beta 98/S and Beta 98 D/S
- Beta 98/S: Includes microphone, 25’ lightweight cable, in-line preamplifier, storage bag and shockmount swivel adapter
- Beta 98D/S: Includes microphone, detachable 15’ heavy-duty Triple-Flex cable, in-line preamplifier, storage bag and A98D drum mount

Optional Accessories
RPM108 Cardioid cartridge...........................................42.95
A412MWS Metal Locking Windscren..........................19.95

Beta 91 Cardioid Condenser Kick Drum Mic
A high performance condenser microphone with a tailored frequency response designed specifically for kick drums and other bass instruments, the Beta 91 combines superior “attack” and “punch” for studio quality sound – even at the extremely high sound pressure levels encountered inside a kick drum. Ideal for live concert applications.
- Boundary effect design produces a strong, solid low-end response
- Wide dynamic range for use in high SPL environments – up to 161dB
- Half-cardioid pattern throughout the frequency range insures high gain before feedback and excellent rejection of unwanted sound
- Low profile design eliminates the need for external mounting hardware
- Includes 15’ heavy-duty Triple-Flex cable and case
- Cardioid pattern allows maximum sound before feedback
- Low-profile design, requires no external mounting hardware
- Gooseneck with clip-on clamp provides secure fit and reliable hold to virtually any wind, brass, or percussion instrument
- Small, low-profile design provides low visibility and minimizes stage clutter.
Beta 52A & Beta 56A
Supercardioid Dynamic Instrument Mics

The Beta 52A is a high output dynamic mic with a tailored frequency response designed specifically for kick drums and other bass instruments. It provides superb attack and “punch”, and delivers studio quality sound even at extremely high sound pressure levels.

Specifically engineered for drum and instrument applications, the Beta 56A’s compact, pivoting design makes it the ideal choice for close miking of tom-toms and other percussion instruments, as well as guitar amplifiers, brass instruments, and woodwinds.

Designed for professional sound reinforcement and project studio recording, the Beta 52A’s modified supercardioid and the Beta 56A’s extremely uniform supercardioid pickup pattern provides high gain before feedback and excellent rejection of unwanted noise. Both feature a built-in dynamic locking stand adapter with an integral XLR connector to simplify installation and keep them in place even when subjected to sharp blows and strong vibrations. A hardened steel mesh grille protects them from the wear and abuse associated with touring.

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>Beta 58</th>
<th>Beta 58H/C</th>
<th>Beta 91</th>
<th>Beta 52A</th>
<th>Beta 66A</th>
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</thead>
<tbody>
<tr>
<td>Microphone Element Type</td>
<td>Condenser</td>
<td>Condenser</td>
<td>Condenser (Electret Bias)</td>
<td>Dynamic</td>
<td>Dynamic</td>
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<tr>
<td>Polar Pattern</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Frequency Response (Hz)</td>
<td>20 to 20k</td>
<td>20 to 20k</td>
<td>20 to 20k</td>
<td>20 to 10k</td>
<td>50 to 16k</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
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<tr>
<td>Output Level Sensitivity</td>
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<td>-56 dBV/Pa</td>
<td>-59 dBV/Pa</td>
<td>-64 dBV/Pa</td>
<td>-51 dBV/Pa</td>
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<tr>
<td>Maximum SPL, 1kΩ²</td>
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<td>155 dB</td>
<td>156 dB</td>
<td>174 dB</td>
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<tr>
<td>Output Noise²</td>
<td>35 dB SPL</td>
<td>31 dB SPL</td>
<td>35 dB SPL</td>
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<tr>
<td>Signal-to-Noise Ratio³</td>
<td>59 dB</td>
<td>63 dB</td>
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<tr>
<td>Dynamic Range</td>
<td>125 dB</td>
<td>112.5 dB</td>
<td>125 dB</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Recommended Windscreen</td>
<td>RK183WS</td>
<td>RK183WS</td>
<td>—</td>
<td>—</td>
<td>A1WS</td>
</tr>
</tbody>
</table>

1 Pa = 94 dB SPL
2 at 1000Hz (0.25% THD, 1000 ohm load)
3 typical, A-weighted/weighted per DIN 45 405
4 at 94 dB SPL

- Frequency response shaped specifically for kick drums and bass instruments
- Built-in dynamic locking stand adapter with integral XLR connector simplifies setup, especially inside a kick drum
- Studio quality performance, even at extremely high sound pressure levels
- Supercardioid pattern for high gain before feedback and superior rejection of unwanted noise
- Hardened steel mesh grille that resists wear and abuse
- Advanced pneumatic shock mount system that minimizes transmission of mechanical noise and vibration
- Neodymium magnet for high signal-to-noise ratio output
- Low sensitivity to varying load impedance

- Tailored frequency response provides drums, amplified instruments, and horns with studio quality sound
- Built-in stand adapter with dynamic locking system and XLR connector simplifies setup and provides greater flexibility
- Uniform supercardioid pattern for high gain before feedback and superior rejection of off-axis sound
- Compact design reduces stage clutter
- Hardened steel mesh grille resists wear and abuse
- Neodymium magnet for high signal-to-noise ratio output
- Minimally affected by varying load impedance
- Advanced pneumatic shock mount system that minimizes transmission of mechanical noise and vibration
**SHURE**

**LIVE PERFORMANCE MICROPHONES**

**WH20/WH30 Headworn Cardioid Mics**

The WH20 (dynamic) and WH30 (condenser) are rugged, lightweight headset mics with high-quality voice pickup. They fit securely for active users, such as aerobics instructors and musicians, with low visibility. Also suitable for any voice communications application where comfort and reliability are required.

- Cardioid pattern provides greater gain-before-feedback and isolation from ambient noise or unwanted sound like air-conditioning
- Carefully shaped frequency response includes a voice-frequency presence peak. Low-frequency rolloff compensates for the proximity effect inherent in cardioid microphones during close-talk operation
- Integrated elastic CROAKIES headband comfortably secures the headset. The headband, wireframe, and gooseneck are adjustable.
- Extra-strong microphone cable resists breakage. Collapsible mic boom for easy storage and transportation. Supplied with foam windscreens and clothing clips

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>WH20TQG</td>
<td>79.50</td>
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<tr>
<td>WH20XLR</td>
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<tr>
<td>WH30TQG</td>
<td>101.95</td>
</tr>
<tr>
<td>WH30XLR</td>
<td>163.95</td>
</tr>
</tbody>
</table>

**512 Cardioid Dynamic Headworn Mic**

Designed for sports and news announcing, communication systems, and remote broadcasting, the 512 consists of the SM10A mic element mounted on an adjustable lightweight headband with a single earphone. By combining an efficient “open-air” headphone with a close-talking dynamic microphone, the 512 offers convenient hands-free operation, and a lightweight frame to reduce fatigue.

- 50 to 15,000 Hz frequency range
- Cardioid pattern reduces unwanted background noise, permits use in noisy environments
- Mic characteristics are tightly controlled resulting in consistent response and output. Headphone response is tailored to enhance voice intelligibility
- Includes an attached 7’ cable, foam windscreens to reduce explosive “popping” sounds, and a cable clip to secure the cable to clothing

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM10A-CN</td>
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<tr>
<td>SM12A-CN</td>
<td>189.95</td>
</tr>
</tbody>
</table>

**Classic Microphones**

**520DX Harmonica Microphone**

The definitive blues harp voice, the 520DX “Green Bullet” is a cardioid, dynamic harmonica microphone with a signature green and chrome die-cast case, contoured to fit perfectly between harmonica and hands. Comes with an attached cable

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>520DX</td>
<td></td>
</tr>
</tbody>
</table>

**55SH Series II Vocal and Speech Mic**

Featuring a signature chrome-plated die-cast case with a vintage ’50s and ’60s look and feel, the 55SH Series II is a cardioid dynamic vocal and speech mic with a tailored response (50 Hz to 15 kHz) that is ideal for PA or theater-stage sound systems, as well as for broadcast and recording. Low-impedance balanced output designed for connection to mic inputs rated at 75 to 300 ohms. Cartridge shock mount reduces stand noise. Has an attached, self-tensioning, 5/8”-27 thread swivel mount. Doesn’t come with a cable.

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>55SH</td>
<td></td>
</tr>
</tbody>
</table>

**SM10A/SM12A Cardioid Dynamic Headworn Mics**

Like the 512, the SM10A and SM12A are headworn cardioid dynamic microphones designed for close-talk applications such as remote-site sports broadcasting and corporate intercom systems. Also ideal for singing drummers, keyboard artists, and other performers who need a headworn vocal mic with superior noise rejection and a smooth, natural-sounding frequency response. The SM 12A has the same features and performance as the SM 10A, but with one in-the-ear monitor.

- They mount on the supplied steel headband assembly. An adjustable pivot on the headband assembly allows the microphone boom to be moved 20° in any direction. The boom also slides out so the microphone can be positioned up to 3½” from the pivot housing
- Close-talk design provides excellent isolation and minimizes gain-before-feedback. Cardioid pattern offers superior rejection of unwanted sound
- Extremely rugged with fully adjustable headband and mic boom
- Smooth, natural-sounding frequency response (50 to 15,000 Hz)
- Supplied windscreens reduce wind noise and explosive breath sounds. A belt clip that fits over the XLR connector and attaches to the user’s belt or waistband provides cable strain relief

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM10A-CN</td>
<td>119.50</td>
</tr>
<tr>
<td>SM12A-CN</td>
<td>189.95</td>
</tr>
</tbody>
</table>

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SM2
Dynamic Headworn Mic with Dual Receivers
The SM 2 is a comfortable, self-adjusting headset with dual enclosed ear receivers and an attached broadcast-quality boom-mounted microphone. Designed for convenient hands-free news and sports broadcasting, remote announcing, interviews, and intercom applications. The SM 2 has a close-talking cardioid mic that discriminates against distant sounds in favor of close sounds. This allows use under noisy conditions without loss or masking of the voice signal.

Dual earphones have a frequency response of 100Hz to 8kHz with excellent voice intelligibility for cue, program, sidetone, or intercom signals. High sensitivity and enclosed ear block out room noise and ensure clarity of the incoming signal.

- Smooth, natural microphone voice frequency response
- Supplied windscreen protects against wind noise and explosive breath sounds
- Mic boom pivots through 155° so that the mic can be correctly positioned at the corner of the mouth from the left or right side. A locking thumbscrew keeps the mic from slipping or twisting out of place
- Self-adjusting, free-swiveling cushioned earpieces offer user comfort, lower fatigue during extended periods of use

SM11
Lavalier Omnidirectional Dynamic Mic
The Shure Model SM 11 is a miniature dynamic lavalier microphone designed for use in television broadcasting (on camera), for sound reinforcement, in certain radio and motion picture applications, and similar uses where a small, professional-quality, microphone is required. The SM 11 has an omnidirectional pickup pattern, and its frequency response is optimized for lavalier use. The microphone is supplied with a tie clasp assembly, tie tack assembly, connector belt clip, and zipped carrying/storage bag. An optional kit for mounting the SM 11 on various musical instruments is available as Shure Model RK279.

- Frequency response optimized for lavalier use.
- Acoustically matches most stand- or desk-mounted microphones
- Small and lightweight for unobtrusive, virtually unseen operation
- Smooth exterior and recessed grille screen minimize clothing noise
- Rugged aluminum case construction
- Extremely flexible long-life cable
- Two mounting options—tie clasp or tie tack
- Convenient, secure belt clip attaches connector to belt or clothing

WL50/WL51
Professional Subminiature Lavalier Mics
Only 5.8mm in diameter, just .34 grams in weight, the WL50 and the WL51 set a new standard for miniature lavalier microphones. Visually unobtrusive they virtually disappear when in use making them ideal for theater, television broadcast, video/film, and event production. And despite their small size, the microphones’ condenser element provides full, clear and natural reproduction of speech. Available individually, as well as with the Shure UHF, UC, SC and LX Wireless Systems.

The omnidirectional WL50 features an extended frequency response and is available in three colors (black, beige and white) and two sensitivity options; Standard (-45dBv/Pa) and Reduced (-55dBv/Pa). It also includes four frequency response caps: two silver mesh (4dB mild boost) and two gold mesh (10dB high boost). Interchange them as needed to achieve optimal sound and clarity for various microphone placements and mounting configurations.

The cardioid WL51 (available in black and white) features a smooth frequency response and low sensitivity of -49dBv/Pa to provide optimal gain with very low noise output. Perfectly suited for those situations where loud ambient environments limit the use of an omni mic. Includes a watertight protective carrying case.

- Subminiature size ideal size for film/video/TV, theater, broadcasting and sound reinforcement
- Designed for wired applications, the SM 93 includes a preamplifier assembly with XLR connectors. The preamp can be pocketed, strapped to the body, or clipped to belt or waistband

SM93
Miniature Omnidirectional Lavalier Mic
The SM 93 is an economical subminiature lavalier condenser microphone designed for use in speech applications. Despite its small size, the SM 93 mic element provides full, clear sound comparable to much larger mics. Its smooth frequency response is specially tailored for chest-worn microphone operation, while controlled low-frequency rolloff reduces clothing and room noise. Runs on 11-52v DC phantom power.

- Supplied with small, inconspicuous mounting hardware. Includes a sew-on mounting bracket, a mounting block with attached tie bar, and an acoustic windscreen to minimize wind noise
**SM7B Cardioid Dynamic Studio Vocal Mic**

Dynamic mic with a smooth, flat, wide-range frequency response, the SM 7B is ideal for music and speech in pro audio applications including recording studio—instrumental and vocal, location recording, motion picture and television scoring, talk shows, radio announcing and production. Offers excellent shielding against electromagnetic hum from computer monitors, neon lights, and other electrical devices. Yoke mounting with captive stand nut for easy mounting and dismounting offers precise control of mic positioning and greater stability.

- Flat, wide-range frequency response for exceptionally clean and natural reproduction of both music and speech.
- Cardioid pattern uniform with frequency and symmetrical about axis, provides maximum rejection and minimum coloration of off-axis sound.
- Switchable bass rolloff and mid-range emphasis (presence boost) controls with graphic display of response setting.
- Internal "air suspension" shock isolation virtually eliminates mechanical noise transmission.
- Pop filter eliminates need for any add-on protection against explosive breath sounds, even for close-up vocals or narration. However, for high-wind conditions and "problem talkers", it includes A7WS detachable windscreen (also gives a warmer tone for close-talk vocals).
- Swiveling bracket with integrated stand adapter for easy mounting and precise microphone positioning.

**VP88 M-S Single-Point Stereo Condenser Microphone**

The VP88 is a single-point, stereo condenser microphone for use in professional studio recording, field production, electronic news gathering (ENG), and studio broadcasting applications. It combines two condenser cartridges in a single housing to create a stereo audio image of the sound source. It is unique in its ability to capture the realism of a live event and yet able to withstand the rigors of field production.

The VP88 uses a mid-side (M - S) configuration. One microphone cartridge (Mid) faces forward to capture on-axis sound using a cardioid pickup pattern. The other mic cartridge (Side) is bi-directional, capturing sound from either side. The VP88 contains an internal M - S matrix with three settings for different degrees of stereo image separation. The internal matrix can be bypassed if an external matrix is used or if stereo imaging is done in post-production. Switches on the top of the microphone control output mode, stereo imaging, low-frequency rolloff settings, and battery on/off.

- Time-coherent, Mid-Side (M - S) design for optimal stereo imaging.
- Built-in stereo matrix for direct control of the stereo spread; direct M - S outputs available.
- Mono compatibility ideal for broadcast applications.
- 40 to 20kHz frequency response.
- Low noise and distortion.
- Wide dynamic range.
- Selectable, low-frequency rolloff (12 dB/octave below 80 Hz) for reduced pickup of ambient noise and stand vibration.
- Internal shock mount for reduced stand vibration and handling noise.
- Built-in "pop" filter provides protection against moderate breath or wind noise.
- Operates on phantom power or a 6V camera battery.
- LED power indicator.
- Supplied with a multi-connector "Y-splitter" cable, foam windscreen, swivel stand adapter, 6-volt battery, and zippered carrying/storage bag.
- Optional accessories include an isolation mount, a 25´ microphone extension cable, a phantom power supply, and a 14´ microphone stand.

**Optional Accessories**

- A88SM Isolation Mount: The optional A88SM Shock Mount provides optimum isolation from stand-transmitted shock and vibration, making it ideal for critical studio applications. It also contains a standard mounting foot for use with most ENG video cameras.......................... 158.50
- C110 25´ Extension Cable (4 conductor, shielded).......................... 66.95
- PS1A Phantom Power Supply ....................................................... 125.95
- S15 14´ Microphone Stand ........................................................... 157.95

For any inquiries regarding your order, call our customer service:
(800) 221-5743 • (212) 239-7765 • FAX: (800) 947-2215 • (212) 239-7549
**VP64A/VP64AL**

High-output omnidirectional mics designed for professional audio and video production, the VP64A and VP64AL combine exceptional performance and comfortable feel with handsome on-camera appearance. Identical except for their handle lengths, the 7⅛” long VP64A is ideal for close-up use and can be used outside as well as indoors. The longer VP64AL is well-suited to location interviews, sports broadcasting, and other situations where the 9⅛” length is an advantage.

- The omnidirectional pickup pattern provides uniform pickup on or off axis, eliminating the need for critical mic positioning
- Tailored frequency response with mid-range presence rise adds crispness and clarity to speech
- Neodymium magnet for increased output and maximized SN ratio
- Internal rubber isolation mount protects the microphone cartridge and minimizes handling noise
- Water-resistant mesh grille allows use in adverse weather conditions
- Supplied windscreen further reduces “pop” and wind noise

<table>
<thead>
<tr>
<th>Microphone</th>
<th>Price</th>
</tr>
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<tbody>
<tr>
<td>VP64A</td>
<td>$77.95</td>
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<tr>
<td>VP64AL</td>
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</table>

**SM63**

Elegant, yet rugged, the high output SM 63 is designed for applications where performance and appearance are critical. Smooth, wide frequency response is tailored for optimum speech intelligibility. Controlled low-frequency rolloff reduces pickup of stand and wind noise. Virtually immune to strong hum fields such as those produced by studio lighting. The champagne-finished SM 63 is designed for hand-held use on stage and in broadcast, recording, and TV studios, while the champagne SM 63L and black-finished SM 63LB are for interviews, sports broadcasts, and other situations where longer microphones are desirable.

- Exceptionally rugged VERA-FLEX grille makes the mic impervious to dents, rust, corrosion, moisture and protects against damage from a drop of up to 6 feet
- Patented shock mount system minimizes handling noise and stand vibration
- Pop filter effectively reduces breath noise
- Includes snap-in stand adapter and case

<table>
<thead>
<tr>
<th>Microphone</th>
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<tbody>
<tr>
<td>SM63</td>
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<tr>
<td>SM63L Champagne</td>
<td>$132.95</td>
</tr>
<tr>
<td>SM63LB Black</td>
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</tbody>
</table>

**SM89**

The SM 89 is a highly directional condenser shotgun mic with distant pickup characteristics suitable for on-location film, television production, theater sound reinforcement, spot news coverage, and wildlife recording.

- Discriminates at a distance against ambient noise – even in noisy surroundings
- On-axis frequency response is very smooth and extended. For clarity and speech intelligibility, a slight presence rise optimizes the high-frequency response to compensate for high-frequency losses
- Low-frequency roll-off pickup of wind, mechanical vibration, ambient noise, and rumble without affecting voice frequencies
- Off-axis response is virtually free of comb-filter effects. This is important when it isn't possible to aim the mic precisely or when you want to pick up dialogue or sound from moving sources
- Operates on 11 to 52v DC phantom supply
- Rugged and reliable, operates over wide range of temperature and humidity
- Extremely lightweight, can be suspended on fishpole for long periods of time without operator fatigue
- Supplied with foam windscreen and strong luggage-grade carrying case

<table>
<thead>
<tr>
<th>Microphone</th>
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<tr>
<td>SM89</td>
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### Microphones

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<th>Polar Pattern</th>
<th>Frequency Response</th>
<th>Impedance</th>
<th>Output Level at 1kHz</th>
<th>Dynamic Range</th>
<th>Signal to Noise Ratio</th>
<th>Weight</th>
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<td>Side: 50 Hz</td>
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<td>80 to 20k Hz</td>
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</tr>
</tbody>
</table>
849 Cardioid Handheld Dynamic Microphone

The 849 is a high-quality electret condenser microphone with a smooth, flat frequency response and cardioid pickup pattern. It provides accurate, uncolored reproduction of the sound source. The 849 is designed for a wide variety of sound reinforcement and recording applications, and is a good choice for use with choirs, amplified sound, or instruments, including strings, brass, woodwinds, and percussion.

- Wide, flat frequency response
- Internal shock mount for reduced stand and handling noise
- Long-life on/off switch for on-stage control
- Low distortion output and wide dynamic range characteristics for a variety of load impedances
- Cardioid pattern is uniform with frequency and symmetrical about axis for maximum rejection of unwanted sound and minimum off-axis coloration
- Low distortion over a wide range of load impedances
- Selectable low-frequency response: flat, 6 or 18 dB/octave rolloff
- 0 dB/10 dB lockable attenuator switch
- Phantom powered (12 to 48v DC)
- Supplied with a swivel adapter, attenuator-switch lock, foam windscreen, and case for carrying and storage

SM81 Studio Condenser Microphone

One of the world’s great condenser microphones, the SM 81 provides precise, detailed sound reproduction for high quality studio recording or broadcasting, and is rugged enough for live sound reinforcement. Its wide frequency response, low noise characteristics, and low RF susceptibility have made it a standard for applications involving acoustic instruments, especially guitar, piano, and cymbals. Operates on phantom power and performs over a wide range of temperatures and humidity conditions.

- Flat response curve for accurate reproduction of sound sources
- Low noise and high output clipping level
- Cardioid pattern is uniform with frequency and symmetrical about axis for maximum rejection of unwanted sound and minimum of-axis coloration
- Low distortion output and wide dynamic range characteristics for a variety of load impedances
- Selectable low-frequency response: flat, 6 or 18 dB/octave rolloff
- 0 dB/10 dB lockable attenuator switch
- Phantom powered (12 to 48v DC)
- Supplied with a swivel adapter, attenuator-switch lock, foam windscreen, and case for carrying and storage

SM94 Unidirectional Condenser Microphone

The SM 94 is a unidirectional condenser mic tailored to the instrument miking needs of professional musicians and sound engineers in live performance and sound recording. Its smooth, flat frequency response is free of either a “presence peak” or a low-frequency rolloff, making it a perfect choice for all types of musical instruments. The SM 94 is equally at home in sound reinforcement systems or in sound studios and motion picture/TV scoring stages. When used with the optional wind-screen, the SM 94 can be used by vocalists and speech-makers who desire a wide, flat response with minimum coloration.

- Powered by AA battery (up to 5,000 hours) or 12 to 48v DC phantom power (also has a built-in battery power backup)
- Supplied with a swivel adapter for use on a mic stand, boom or gooseneck, and a zippered vinyl storage bag.
- Wide, flat response for optimum musical instrument sound reproduction
- Full spectrum sound—no presence peak or low-end rolloff
- Low distortion output and wide dynamic range for variety of load impedances
- Cardioid pattern is uniform with frequency and symmetrical about axis for maximum rejection of unwanted sound and minimum of-axis coloration
- Very low susceptibility to RF and electromagnetic hum
- Shock-mounted cartridge for reduced handling noise

SM94-LC without cable .......................................................... 174.95
KSM STUDIO INSTRUMENT MICROPHONES

The KSM 141, KSM 137, and KSM 109 are instrument condenser microphones designed for studio use. As the latest additions to the KSM line of professional studio products, the group is designed to mic instruments including: acoustic guitar, drum overheads, high-hat cymbals, guitar cabinets, pianos, percussion, stringed instruments, and more. Additionally, with a range of features and prices, the trio offers a solution for high-end recording, project, and home studio users alike.

KSM141 Switchable Omnidirectional Cardioid Condenser

As the premier entry within the group, the KSM 141 is a dual-pattern mic offering a selection of either cardioid or omnidirectional polar patterns with the turn of a rotating mechanical switch. Other features include Shure's Class A transformerless preamp circuitry, an ultra-thin, highly sensitive diaphragm, and a switchable, 3-position low frequency filter to limit unwanted background noise and proximity effect. The mic can reproduce sounds between 20 and 20,000 Hz. Further complementing the feature set is a switchable pad (15 or 25 dB) for managing extremely high SPL sources such as electric guitar cabinets and snare drums. The KSM 141 includes a break-resistant mic clip, carrying case, and Popper Stopper windscreen, and is available in stereo pairs.

- A mechanical polar pattern switch for highly consistent cardioid and true omnidirectional polar patterns. Provides flexibility in a wide variety of recording applications
- Ultra-thin, 2.5 micron, 24 karat gold-layered, low mass Mylar diaphragm for superior transient response
- Class A, discrete, transformerless preamplifier for transparency, extremely fast transient response, no crossover distortion, and minimal harmonic and intermodulation distortion
- Premium electronic components, including gold-plated internal and external connectors
- Subsonic filter eliminates low frequency rumble (less than 17 Hz) caused by mechanical vibration
- Three-position switchable pad (0 dB, 15 dB, and 25 dB) for handling extremely high sound pressure levels (SPLs)
- Three-position switchable low-frequency filter to reduce background noise and counteract proximity effect

KSM137 Cardioid Condenser

A single pattern (cardioid) version of the KSM 141, the KSM 137 performs with the same detailed sonic precision, and excels on acoustic guitar, drum overheads, and hi-hats. Also like the dual-pattern KSM 141, the KSM 137 is available in a stereo pair, sports a champagne finish, and comes with accessories including a break-resistant mic clip, carrying case, and Popper Stopper windscreen. The Shure KSM 137 is an end-address condenser microphone with a cardioid polar pattern. Designed for studio use, yet rugged enough for live applications, the KSM 137 can withstand extremely high sound pressure levels (SPL). Its low self-noise and extended frequency response make it ideal for recording musical instruments.

KSM109 Cardioid Condenser

Last among the group is the affordable, cardioid KSM 109. A value-engineered cardioid condenser unit, it too offers an extended frequency response (20 Hz - 20,000 Hz) for natural reproduction of sound with smooth high-end delivery and tight low-end. Equipped with a switchable pad (15 dB) to accommodate high SPL sources, as well as circuitry using the same architecture employed by its higher-priced counterparts within the KSM product group, the champagne-finished mic comes with a zippered carrying pouch, microphone clip, and Popper Stopper windscreen. The Shure KSM 109 offers incredible performance for its price. It combines an extended frequency response for natural sound reproduction with a smooth high end and a tight, controlled low end. It's all the mic you need for studio instrument recording.

<table>
<thead>
<tr>
<th>Microphone Element Type</th>
<th>SM81</th>
<th>B49</th>
<th>SM94</th>
<th>KSM141</th>
<th>KSM137</th>
<th>KSM109</th>
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<tr>
<td>Polar Pattern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Frequency Response (Hz)</td>
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<td>40 to 16k</td>
<td>40 to 16k</td>
<td>20 to 20k</td>
<td>20 to 20k</td>
<td>20 to 20k</td>
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<tr>
<td>Rated Impedance</td>
<td>150 Ω</td>
<td>600 Ω</td>
<td>150 Ω</td>
<td>150 Ω</td>
<td>150 Ω</td>
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<tr>
<td>Sensitivity (Phantom/Battery)</td>
<td>-45 dBV/Pa</td>
<td>-51 dBV/Pa</td>
<td>-49 dBV/Pa</td>
<td>-37 dBV/Pa</td>
<td>-37 dBV/Pa</td>
<td>-41 dBV/Pa</td>
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<tr>
<td>Maximum SPL (Phantom/Battery)</td>
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<td>139 dB</td>
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<tr>
<td>Self Noise (Phantom/Battery)</td>
<td>16 dB</td>
<td>22 dB</td>
<td>22 dB</td>
<td>14 dB</td>
<td>14 dB</td>
<td>19 dB</td>
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<tr>
<td>Signal-to-Noise Ratio</td>
<td>78 dB</td>
<td>71 dB</td>
<td>69 dB</td>
<td>80 dB</td>
<td>75 dB</td>
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</tbody>
</table>

1 Pa = 94 dB SPL
2 at 1kHz, 800Ω
3 typical, A-weighted
4 at 94 dB SPL
KSM27 Studio Condenser Mic

Designed to be the workhorse for project and home recording studio, the KSM 27 is a large-diaphragm, side-address cardioid microphone optimized for vocals, but also capable of handling high-input SPLs to accommodate sound sources such as drums and guitar amplifiers. And although used primarily in the studio, it is rugged enough for live applications as well.

The KSM 27 features a 1-inch ultra-thin Mylar diaphragm, an internal shock mount to keep self-noise low, and utilizes Class A transformerless preamp circuitry to virtually eliminate crossover distortion and bring improved linearity across its entire operating range. Like other KSM microphones, the KSM 27’s durable zinc die-cast housing comes finished in an attractive champagne color. To protect the microphone from damage, a hardened low-carbon steel grille shields its capsule. Accessories provided with each mic include a Velveteen pouch and a rubber-isolated, external locking shock mount.

◆ 1”, externally biased, ultra-thin, 24k gold-layered, low mass, Mylar diaphragm provides superior transient response
◆ Class A, discrete, transformerless preamp circuitry for transparency, extremely fast transient response and no crossover distortion—improved linearity across the entire frequency range
◆ Premium electronic components and gold-plated internal and external connectors
◆ Subsonic filter eliminates rumble from mechanical vibration below 17 Hz
◆ Switcheable 15 dB pad for handling extremely high sound pressure levels (SPLs)
◆ Internal shock mount reduces handling and stand noise (keeps self-noise low at 14 dB).

KSM32 Cardioid Studio Condenser Mic

The KSM 32 has a classic, elegant appearance and even more impressive performance provided by its extended frequency response, low self-noise, high output level, and increased dynamic range. The KSM 32 is also flexible enough to handle a variety of demanding sound sources including vocals, acoustic and wind instruments, ensembles, and overhead miking of drums and percussion. In addition, it has the warmth and sensitivity necessary for superb sound reproduction in professional studio production and live sound recording.

◆ For studios, the KSM 32/SL has a light champagne finish and includes an aluminum carrying case, shock and swivel mounts and a velvet pouch. For live applications, the KSM 32/CG has a charcoal grey finish and includes a swivel mount and padded zipper bag.
◆ Frequency response 20Hz - 20kHz

The KSM32 and KSM44 both include:

◆ ShureLock swivel mount
◆ Protective velveteen pouch
◆ ShureLock elastic-suspension shock mount
◆ Locking aluminum carrying case

SHURE
KSM STUDIO MICROPHONES

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◆ Class A, discrete, transformerless preamp circuitry for transparency, extremely fast transient response and no crossover distortion—improved linearity across the entire frequency range
◆ Premium electronic components and gold-plated internal and external connectors
◆ Subsonic filter eliminates rumble from mechanical vibration below 17 Hz
◆ Switcheable 15 dB pad for handling extremely high sound pressure levels (SPLs)
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◆ Protective velveteen pouch
◆ ShureLock elastic-suspension shock mount
◆ Locking aluminum carrying case

ONE HOUR FREE PARKING
AT 349 W. 34th STREET (with purchase of '100 or more)
SHURE
KSM STUDIO MICROPHONES

KSM44 Multi Pattern Studio Condenser Mic

The KSM 44 is a multiple pattern (cardioid, omnidirectional, bi-directional), externally biased, dual large diaphragm condenser microphone with extremely low self-noise (7dB). Developed to meet the needs of studio recording musicians, the warm, rich sound of the KSM 44 delivers exceptional performance, tailored to deliver vivid reproduction of voice for the most critical recordings. The KSM 44 also offers great flexibility in a variety of recording applications, working well on acoustic and amplified instruments, as its capacity for managing high SPLs accommodates loud sound sources such as drums and guitar amplifiers.

- Dual 1-inch, externally biased, ultra-thin 24-karat gold-layered, Mylar diaphragms provide superior transient response
- Class A, discrete, transformerless preamplifier for transparency and extremely fast transient response
- Subsonic filter eliminates rumble from mechanical vibration below 17 Hz.
- Switchable 15 dB pad for handling high SPLs
- 3-position switchable low-frequency filter helps reduce unwanted background noise or counteract proximity effect.
- Integrated three-stage “pop” protection grille reduces plosives and other breath noise; internal shockmount reduces handling/stand noise.

<table>
<thead>
<tr>
<th>Cartridge Type</th>
<th>KSM-27</th>
<th>KSM-32</th>
<th>KSM-44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cartridge Type</td>
<td>Externally Biased Condenser</td>
<td>Permanently Biased Condenser</td>
<td>Externally Biased Condenser</td>
</tr>
<tr>
<td>Frequency Response (Hz)</td>
<td>20 to 20k</td>
<td>20 to 20k</td>
<td>20 to 20k</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>150Ω</td>
<td>150Ω</td>
<td>150Ω</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>-37 dBV/Pa</td>
<td>-36 dBV/Pa</td>
<td>-37 dBV/Pa</td>
</tr>
<tr>
<td>Self Noise</td>
<td>14 dB</td>
<td>13 dB</td>
<td>7 dB</td>
</tr>
<tr>
<td>Maximum SPL, 1k (\Omega) Load</td>
<td>133 dB</td>
<td>133 dB</td>
<td>127 dB</td>
</tr>
<tr>
<td>Output Clipping Level, 1k (\Omega) Load</td>
<td>1dBV</td>
<td>1dBV</td>
<td>1dBV</td>
</tr>
<tr>
<td>Dynamic Range, 2500 (\Omega) Load</td>
<td>124 dB</td>
<td>126 dB</td>
<td>125 dB</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>81 dB</td>
<td>81 dB</td>
<td>81 dB</td>
</tr>
<tr>
<td>Attenuation Switch</td>
<td>0 or -15 dB</td>
<td>0 or -15 dB</td>
<td>0 or -15 dB</td>
</tr>
<tr>
<td>Low Frequency Response Switch</td>
<td>Flat, -6 dB/octave below 115 Hz, -18 dB/octave below 80 Hz</td>
<td>Flat, -6 dB/octave below 115 Hz, -18 dB/octave below 80 Hz</td>
<td>Flat, -6 dB/octave below 115 Hz, -18 dB/octave below 80 Hz</td>
</tr>
<tr>
<td>Phantom Power</td>
<td>48 Vdc ± 4 Vdc (IEC-268-15/DIN 45 596) positive pins 2 and 3</td>
<td>48 Vdc ± 4 Vdc (IEC-268-15/DIN 45 596) positive pins 2 and 3</td>
<td>48 Vdc ± 4 Vdc (IEC-268-15/DIN 45 596) positive pins 2 and 3</td>
</tr>
<tr>
<td>Current Drain</td>
<td>5.4 mA typical at 48 Vdc</td>
<td>4.65 mA typical at 48 Vdc</td>
<td>5.4 mA typical at 48 Vdc</td>
</tr>
<tr>
<td>Common Mode Rejection Ratio</td>
<td>≥ 50 dB, 20 Hz to 20 Hz</td>
<td>≥ 50 dB, 20 Hz to 20 Hz</td>
<td>≥ 50 dB, 20 Hz to 20 Hz</td>
</tr>
<tr>
<td>Polarity</td>
<td>Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3</td>
<td>Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3</td>
<td>Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3</td>
</tr>
<tr>
<td>Dimensions</td>
<td>2.20” max. body diameter, 6.15” long</td>
<td>2.20” max. body diameter, 7.37” long</td>
<td>2.20” max. body diameter, 7.37” long</td>
</tr>
</tbody>
</table>

\(\text{Typical, at 1kHz; } 1 \text{ Pa} = 94 \text{ dB SPL} \)

- 6” diameter highly durable four-layer screen readily softens harsh “P” and “B” consonants
- Fully adjustable 14” gooseneck with “position memory” (stays put until you change it)
- Attaches to virtually any floor or boom stand via a mounting clamp equipped with a non-scratching nylon insert
SHURE

INSTALLED SOUND—MICROFLEX SERIES

The entire Microflex family of miniature condenser microphones have been designed with performance, consistency and ease of installation in mind. Their cardioid, super-cardioid and omni-directional condenser cartridges are completely interchangeable and fit every Microflex Gooseneck, Overhead, Boundary, and Lavalier model for the ultimate in convenience and uniform sound. Plus, each Microflex model includes all the basic accessories needed for complete installation.

**MX-391/ 392/ 393**

**Surface-Mount Mics**

The low-profile Microflex Series boundary mics are designed to be unobtrusively placed flat on a stage, table top or wall while offering high quality audio for sound reinforcement, boardrooms, broadcast or recording. Available with interchangeable cardioid, super-cardioid and omni-directional polar patterns in battery power, phantom power or pigtail versions, giving you the flexibility for any application.

- 50 Hz to 17 kHz frequency response
- Easy to use paint mask for your custom-color installations
- Programmable silent membrane switches with LED indicator can be set for Push to Talk, Push to Mute or Push On/Push Off modes (M X392 and M X393 only)

**Surface-Mount Microphone Models Include:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX391/C</td>
<td>(cardioid) includes attached 12´ cable and separate in-line preamp, phantom power only</td>
<td>158.95</td>
</tr>
<tr>
<td>MX391/S</td>
<td>super-cardioid version of above</td>
<td>169.50</td>
</tr>
<tr>
<td>MX391/O</td>
<td>omni-directional version of above</td>
<td>149.50</td>
</tr>
<tr>
<td>MX391W/C, S or O</td>
<td>White versions of above available for the same price</td>
<td></td>
</tr>
<tr>
<td>MX391BP/C</td>
<td>(cardioid) Battery/phantom power of above includes MX1BP battery/phantom power module</td>
<td>174.95</td>
</tr>
<tr>
<td>MX391BP/S</td>
<td>super-cardioid version of above</td>
<td>179.95</td>
</tr>
<tr>
<td>MX391BP/O</td>
<td>omni-directional version of above</td>
<td>162.50</td>
</tr>
<tr>
<td>MX391LP/C</td>
<td>(cardioid) without preamplifier for wireless systems, uses Tini Q-G connector</td>
<td>102.50</td>
</tr>
<tr>
<td>MX391LP/S</td>
<td>super-cardioid version of above</td>
<td>108.50</td>
</tr>
<tr>
<td>MX391LP/O</td>
<td>omni-directional version of above</td>
<td></td>
</tr>
<tr>
<td>MX391WLP/C, S or O</td>
<td>White versions of above available for the same price</td>
<td></td>
</tr>
<tr>
<td>MX392/C</td>
<td>(cardioid) includes programmable membrane switch with LED indicator, Built-in preamplifier, detachable cable terminates to a male XLR connector, phantom power only</td>
<td>202.50</td>
</tr>
<tr>
<td>MX392/S</td>
<td>super-cardioid version of above</td>
<td>208.50</td>
</tr>
<tr>
<td>MX392/O</td>
<td>omni-directional version of above</td>
<td>193.95</td>
</tr>
<tr>
<td>MX393/C</td>
<td>(cardioid) includes programmable membrane switch with LED indicator, Built-in preamplifier, detachable cable terminates to a male XLR connector, phantom power only</td>
<td>202.50</td>
</tr>
<tr>
<td>MX393/S</td>
<td>super-cardioid version of above</td>
<td>208.50</td>
</tr>
<tr>
<td>MX393/O</td>
<td>omni-directional version of above</td>
<td>193.95</td>
</tr>
</tbody>
</table>

**MX-183/184/185 Lavalier Microphones**

Three wired lavalier microphones from the Shure Microflex series no larger than a paper clip. Optional interchangeable microphone cartridges allows you to tailor the microphones to any audio environment. The mics attach to the supplied power supply with the Shure Tini Q-G connector. When the power supply is removed, the microphones can be used with any Shure wireless transmitters. Well suited for all levels of location video work, recording and live applications.

- Condenser lavalier microphones
- Interchangeable cartridges for omni-directional, cardioid and super-cardioid polar patterns
- Frequency Response 60 - 20 kHz
- Includes both a pivoting single and dual microphone tie clip
- Black, snap-fit foam windscreen
- Compatible with all Shure wireless transmitters
- Available with belt-clip phantom power only preamp and MX1BP battery/phantom power preamp
- Attached 4´ cable with Tini Q-G connector

**Lavalier Microphone Models Include**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX183</td>
<td>Omni-directional condenser lavalier, belt-clip preamp, rotatable tie clip, dual tie clip, snap-fit windscreen</td>
<td>162.95</td>
</tr>
<tr>
<td>MX184</td>
<td>Super-cardioid version of above</td>
<td>179.95</td>
</tr>
<tr>
<td>MX185</td>
<td>Cardioid version of above</td>
<td>174.95</td>
</tr>
<tr>
<td>MX183BP</td>
<td>Omni-directional condenser lavalier microphone with 4´ attached cable, MX1BP preamplifier</td>
<td>174.95</td>
</tr>
<tr>
<td>MX184BP</td>
<td>Super-cardioid version of above</td>
<td>193.95</td>
</tr>
<tr>
<td>MX185BP</td>
<td>Cardioid version of above</td>
<td>187.95</td>
</tr>
</tbody>
</table>
Gooseneck Microphones

Designed with premium audio quality and ease of installation in mind, these miniature condenser gooseneck microphones feature swappable cardioid, super-cardioid and omni-directional cartridge capability and come complete with all the necessary accessories. A variety of mounting options make these mics suitable for any installation. All models run on phantom power and have a frequency response of 50Hz to 17kHz.

Gooseneck Microphone Models Include:

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX412/C</td>
<td>(cardioid) 12” gooseneck, terminates to XLR connector</td>
<td>179.95</td>
</tr>
<tr>
<td>MX412/S</td>
<td>(super-cardioid version of above)</td>
<td>187.95</td>
</tr>
<tr>
<td>MX412/O</td>
<td>(omni-directional version of above)</td>
<td>169.95</td>
</tr>
<tr>
<td>MX418/C</td>
<td>(cardioid) 18” version of above</td>
<td>179.95</td>
</tr>
<tr>
<td>MX418/S</td>
<td>(super-cardioid version of above)</td>
<td>187.95</td>
</tr>
<tr>
<td>MX418/O</td>
<td>(omni-directional version of above)</td>
<td>169.95</td>
</tr>
<tr>
<td>MX412D/C</td>
<td>(cardioid) 12” gooseneck with desktop base, with programmable switch,</td>
<td>237.50</td>
</tr>
<tr>
<td></td>
<td>logic input and output terminals and attached 10’ XLR cable</td>
<td></td>
</tr>
<tr>
<td>MX412D/S</td>
<td>(super-cardioid version of above)</td>
<td>243.50</td>
</tr>
<tr>
<td>MX412D/O</td>
<td>(omni-directional version of above)</td>
<td>229.95</td>
</tr>
<tr>
<td>MX418D/C</td>
<td>(cardioid) 18” version of above</td>
<td>237.50</td>
</tr>
<tr>
<td>MX418D/S</td>
<td>(super-cardioid version of above)</td>
<td>243.50</td>
</tr>
<tr>
<td>MX418D/O</td>
<td>(omni-directional version of above)</td>
<td>219.95</td>
</tr>
<tr>
<td>MX412SE/C</td>
<td>(cardioid) 12” gooseneck with push-button mute switch and LED status</td>
<td>193.95</td>
</tr>
<tr>
<td></td>
<td>indicator, terminates to male XLR connector</td>
<td></td>
</tr>
<tr>
<td>MX412SE/S</td>
<td>(super-cardioid version of above)</td>
<td>196.50</td>
</tr>
<tr>
<td>MX412SE/O</td>
<td>(omni-directional version of above)</td>
<td>186.95</td>
</tr>
<tr>
<td>MX418SE/C</td>
<td>(cardioid) 18” version of above</td>
<td>193.95</td>
</tr>
<tr>
<td>MX418SE/S</td>
<td>(super-cardioid version of above)</td>
<td>196.50</td>
</tr>
<tr>
<td>MX418SE/O</td>
<td>(omni-directional version of above)</td>
<td>186.95</td>
</tr>
<tr>
<td>MX418S/C</td>
<td>(cardioid) 12” gooseneck</td>
<td>196.50</td>
</tr>
<tr>
<td>MX418S/S</td>
<td>(super-cardioid version of above)</td>
<td>202.50</td>
</tr>
<tr>
<td>MX418S/O</td>
<td>(omni-directional version of above)</td>
<td>189.95</td>
</tr>
</tbody>
</table>

Swappable Microflex Series Cartridges

<table>
<thead>
<tr>
<th>Cartridge</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>R183B</td>
<td>Omni-directional</td>
<td>38.95</td>
</tr>
<tr>
<td>R184B</td>
<td>Super-cardioid</td>
<td>53.95</td>
</tr>
<tr>
<td>R185B</td>
<td>Cardioid</td>
<td>47.50</td>
</tr>
</tbody>
</table>

MX-202 Hanging Microphones

These phantom power only miniature hanging condenser mics feature the same interchangeable capsule design as the rest of the Microflex series. Available with either plate-mount or stand adapters ideal for use as overheads for live theatrical and musical productions. The flexible 4” gooseneck allows you to unobtrusively aim the mics exactly the way you want them.

Hanging Microphone Models Include:

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX202B/C</td>
<td>(cardioid) 4” gooseneck with in-line preamplifier and stand adapter, black finish</td>
<td>162.95</td>
</tr>
<tr>
<td>MX202B/S</td>
<td>super-cardioid version of above</td>
<td>169.50</td>
</tr>
<tr>
<td>MX202B/O</td>
<td>omni-directional version of above</td>
<td>154.95</td>
</tr>
<tr>
<td>MX202W/C, S or O</td>
<td>White versions of above available for same price</td>
<td></td>
</tr>
</tbody>
</table>
EZG Miniature Cardioid Condenser Gooseneck Microphones

These miniature gooseneck condenser microphones are the perfect choice to capture speech and vocals in environments where quality, value and budget are primary considerations. Designed for podium or desk applications, they offer a cardioid polar pattern, and are available in four different models, dependent on height and mounting application. Available in either 12” or 18” lengths, each charcoal gray microphone comes standard with a single flexible gooseneck section for ease in accurate positioning, as well as a matching slip-on foam windscreen. Choose a locking flange mount with an integrated preamp and XLR connector for easy permanent install. Or, choose side-exit mounting with 10’ cables, in-line preamps and threaded mounting flanges - easily adaptable to a standard mic stand.

EZG/12 (12”) and EZG/18 (18”) Mics
- Cardioid polar pattern
- Integrated preamplifier with XLR connector
- Locking flange mount

EZG/12SE (12”) and EZG/18SE (18”) Mics
- Cardioid polar pattern
- Attached 10’ side exit cable with in-line preamplifier
- Threaded mounting flange

EZO Overhead Microphones

The perfect choice to reinforce choirs and performance groups in recording or sound reinforcement in environments where quality, value and budget are primary considerations. The overhead condenser microphones feature a cardioid polar pattern, and are available in charcoal gray or white for unobtrusive placement in most surroundings. Each Easyflex overhead microphone ships with a flexible wire form for accurate and stable positioning when suspension mounting to a ceiling, and ships with 30’ cable with in-line preamplification, and a matching slip-on windscreen.

EZO/G Charcoal Gray and EZO/W White Overhead Microphones
- Cardioid polar pattern
- Attached 30’ cable with in-line preamplifier
- Adjustable wire frame for easy positioning

EZO/C Cardioid and EZO/O Omnidirectional Boundary Microphones
- Charcoal gray finish
- Attached 12’ cable with in-line preamplifier
- Recessed mounting holes for quick installation

EZB Miniature Cardioid Condenser Boundary Mics

The perfect choice for all types of low profile applications, where quality, value and budget are primary considerations. The boundary condenser microphones feature either a cardioid or omnidirectional polar pattern, and are available with a charcoal gray finish for unobtrusive placement in most surroundings. Each Easyflex boundary microphone ships with an attached 12’ cable with in-line preamplifier, and features recessed mounting holes for ease of installation.

www.bhphotovideo.com
The 515BSLX is designed for mounting on a gooseneck or fixed pipe with a 5/8 in.–27 thread. Ideal for use in communications, paging, and talkback systems, the mic is supplied with a switch that controls the microphone audio and a relay circuit, permitting hands-free operation. Mic comes with a 16-ft. four-conductor, two conductors shielded, cable. The 515BSLX is wired with the microphone circuit normally open for use in parallel-wired microphone installations.

**515BSLX**

- **Attached cable** .......................................................... 57.50

**515SBGX, 515SBG-18X and 515SBG-18XF**

The 515SBGX, 515SBG-18X, and 515SBG-18XF are designed to be mounted on flexible goosenecks or fixed pipes. Use in paging applications, and base station communications, or as talkback or cueing mics in TV, film, and recording studios. Because of their low impedance, these mics retain their level and response characteristics even when long cable lengths are used. Each is equipped with a push-to-talk button and a four-conductor cable (two conductors shielded).

- **515SBGX**: Attached cable ........................................... Call
- **515SBG-18X**: 18” gooseneck with A13HD mounting flange ........ Call
- **515SBG-18XF**: 18” gooseneck with A12 mounting flange .......... Call

**515BSM**

The 515BSM is designed for hand-held or fixed use. With a push-to-talk switch and a four-conductor retractable cable (2 shielded conductors) it can be used in public speaking, stage performance, and paging or public address systems. The mic is wired with the microphone circuit normally open for use in parallel microphone installations.

- **515BSM**: Attached cable .............................................. 89.50

**515BSLG24F & 515BSLG27F**

The 515BSLG24F and 515BSLG27F are each threaded on a black gooseneck with a black mounting flange. Especially suited for use in communications, paging, and talkback systems, they have a switch that sets their audio and relay circuit on or off, while the integral gooseneck permits hands-free operation. The attached four-conductor cable (two conductors shielded) extends 1.2m (4 ft.) from the mounting flange and terminates in a female 4-pin XLR connector.

- **515BSLG24F**: includes a 24-in. black gooseneck and 3-inch black mounting flange. Cable has 4 pin XLR female connector ............... 68.95
- **515BSLG27F**: includes a 27-in. black gooseneck and 3-inch black mounting flange. Cable has 4 pin XLR female connector ............... 68.95

**515SDX**

Suitable for speech pickup in schools, churches, and meeting rooms, the 515SDX has a locking ON/OFF switch and an internal impedance selection socket mounted on the XLR connector for switching between high and low impedance. A slip-in swivel adapter is supplied for stand-mounted use.

- **515SDX**: Attached cable ............................................. 54.95

**588SDX**

The 588SDX is a ball-type, dual-impedance, cardioid dynamic microphone that provides excellent voice reproduction. Its spherical grille is a very effective wind and pop filter which is especially good when used for closeup vocal miking. The ball microphone is equipped with a lockable ON/OFF switch and an internal impedance selection socket located on the XLR connector for switching between high and low impedance. A slip-in swivel adapter is supplied for the convenience of stand-mounted use.

- **588SDX**: Attached cable ............................................. 57.95

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<table>
<thead>
<tr>
<th>Microphone</th>
<th>515BSLX</th>
<th>515BSLX</th>
<th>515SBGX</th>
<th>515SDX</th>
<th>515SBG24F</th>
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<td>80 to 15k</td>
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<td>A1WS</td>
<td>A1WS</td>
<td>A58WS</td>
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</table>

Additional notes:
- **1 Pa = 94 dB SPL**
- **at 1kHz (0.25% THD, 1000 ohm load)**
503BG Unidirectional Dynamic Microphone

Developed for computer voice recognition applications, the 503BG offers excellent voice fidelity while reducing background noise. Equally well-suited for close-talking applications such as paging and talkback. The 503BG features a low-impedance, moving coil type transducer with an integral humbucking coil and an attached two-conductor shielded cable with a built-in strain relief. It produces a frequency response with an essentially constant output voltage over the voice spectrum when used close to the sound source. The 503BG’s case is aluminum with a black enamel finish. It mounts to a gooseneck, a fixed pipe or a mic stand using a standard 5/8”–27 thread. Includes #4 Allen (hex-head) wrench.

- Optimized for voice processing and computer voice recognition applications
- Smooth frequency response with excellent fidelity in the voice range
- Cardioid pickup pattern and close-talking operation keep unwanted signals and background noise at low levels
- Constant output over voice spectrum when close talked
- Humbucking coil minimizes undesirable hum effects such as CRT interference
- Low-impedance design permits long cable runs in extreme hum fields
- Small unobtrusive design does not interfere with CRT visibility
- Rugged and reliable for years of consistent operation

561 Omnidirectional Dynamic Mic

A low-impedance dynamic mic, the omnidirectional 561 is designed for use on a stand or flexible gooseneck. Its smooth frequency response is tailored for optimum speech intelligibility, making it ideal for language labs, paging applications, and base station communications. The 561 is also suitable for use as a talk-back or cuing microphone in TV, film, and recording studios.

- Frequency response tailored for speech applications, with bass rolloff and mid-range “presence” rise
- Shock-mounted cartridge for reduced stand and handling noise
- Humbucking coil minimizes undesirable hum effects such as CRT interference
- Rugged die-cast aluminum construction
- Lockable stainless steel mesh grille
- Optional gooseneck and mounting flange

562 Noise-Canceling Omnidirectional Dynamic Mic

The 562 is a noise-canceling mic designed for voice applications in fixed-station paging and radio communications. It provides highly intelligible speech communication where high volume background noise is present. The 562 has a smooth response and is ruggedly constructed to withstand a wide range of humidities and temperatures. With its standard 5/8”–27 thread mount, the 562 attaches directly to boom or a gooseneck with the cable concealed inside. Ideal for language labs, paging applications in noisy environments and base station communications, as well as a talk-back or cuing microphone in TV, film, and recording studios.

- Excellent response for voice reproduction
- Noise-canceling design
- Low impedance
- Rugged construction
- Withstands wide range of temperatures and humidities
- Mounts on gooseneck and lockable with Allen set-screw (Allen wrench supplied)

545 Unidyne III

The 545SD Unidyne III is a dual-impedance, cardioid dynamic microphone. Shipped connected for low-impedance operation. The 545SD is a favorite for instrument pickup and re-cording, and can be used on lecterns for public address systems such as those used in legislatures, convention halls, hotels, public auditoriums, stadiums, schools, and churches.

- Selectable dual-impedance operation
- Silent magnetic reed on/off switch with lock option
- Exceptionally uniform cardioid pattern minimizes feedback in PA applications
- Frequency response 50 to 15,000 Hz

5445-LC: Without cable

565 SD

The 565 SD is a dual-impedance, cardioid dynamic microphone with a strong, wire-mesh, spherical front grille that contains a very effective wind and “pop” filter. Shipped connected for low-impedance operation, the mics provide excellent vocal or speech reproduction on lecterns and stages, and are a popular choice for use in public auditoriums, churches, convention halls, and schools.

- Selectable dual-impedance operation
- Silent magnetic reed on/off switch with lock-on option
- Frequency response 50 to 15,000 Hz

565SD-CN: With 20’ XLR cable...........$125.95
565SD-LC: Without cable.................$107.50
514B

Omnidirectional Dynamic Handheld Microphone

The 514B is a low impedance, dynamic, hand-held microphone designed for paging and public address systems. It provides clear, natural voice response and high intelligibility. It features an omnidirectional pickup pattern and a frequency response tailored for optimum speech intelligibility. It also includes an impedance selection switch and a locking press-to-talk switch. The press-to-talk switch can be converted to a monitor/transmit switch with the Shure RK199S Split-Bar Conversion Kit.

527 Series

Dynamic Communications Mic

The 527 Series are extremely reliable, high impedance (527A) and low impedance (527B) dynamic hand-held microphones with an extended low- and high-frequency response particularly suited to ham radio use, mobile FM transmission, and top-quality paging systems. The mics have a clear, crisp, and natural voice response. They feature professional design, small size and light weight. The modular construction of the 527 Series account for their tremendous ease of field serviceability. The cartridge, switch, and cable are easily replaceable, if necessary. The mics are wired so that the wires will not crimp or break. They fit naturally and comfortably in the hand and are unaffected by heat or humidity. The exclusive ARM O-DUR case is impervious to oil, grease, fumes, salt spray, sun, rust, and corrosion and is outstanding in its ability to withstand mechanical shocks and vibrations. The "Million-Cycle" leaf-type switch is double-pole, single-throw, designed to withstand severe operating conditions and constant usage.

527A Microphone

200Hz to 5kHz frequency response, high impedance ............ 48.95

527B Microphone

300Hz to 5kHz frequency response, low impedance ............. 54.50

527C  Microphone

Built-in transistor amplifier .......................... 59.50
**Shock Mounts**

**A53M Isolation Mount**

The A53M isolation mount/swivel adapter reduces transmission of mechanical noise and vibration by more than 20 dB. Compatible with the SM 89 and SM 94, or any Shure mic with a tapered handle... **37.50**

**A55M Isolation Mount**

An isolation mount, the A55M Shock Stopper reduces transmission of mechanical noise and vibration by more than 20 dB. Compatible with the SM 57, SM 58, SM 87/87A/87C, Beta 58A and Beta 87A, or any mic with 3/4” and larger handle........................................... **44.95**

**A55HM Isolation Mount**

Designed for microphones with a tapered handle, the A55HM (Half Mount) Shock Stopper features a patented design that allows microphones to be snapped in and out without removing the cable ........................................... **39.95**

**A88SM Isolation Mount**

Designed for the VP88 or any mic with a handle diameter of 1 1/4”, the A88SM provides exceptional freedom from mechanically transmitted noise. Through its use of the highly effective Shock Stopper half-mount isolators and secure cable locking design, the A88SM eliminates most noise associated with stands, booms, and cable movement ........................................... **158.50**

**A89SM Shock Mount**

The A89SM reduces mechanical noise transmission by more than 20 dB. Designed for the SM 89 shotgun mic, it also fits any 3/4” diameter microphone. Three integrated thread sizes allow you to attach the mount to stands or booms with 3/8–16, 5/8–27, or 5/16–18 threads. A cable securing mechanism prevents the transmission of mechanical noise through the cable and connector. Locking, pivoting design provides maximum aiming capabilities............................... **91.95**

**Quick-Release Shock Mounts for Gooseneck Mics**

These accessories allow permanent installation of a quick-release shock mount for use with a wide variety of gooseneck mics.

**A400SM**

Offering Shock-Stopper construction, the A400SM decouples the mic from the mounting surface and reduces impact or surface noise by up to 20 dB ... **24.95**

**A400XLR**

The A400XLR assembly consists of a 3-pin XLR-type (female) connector and insert. Existing A400SM Shock Mounst can be retrofitted for quick release performance with the A400XLR Connector/Insert........................... **22.50**

**A400SMXLR**

An A400SM Shock Mount with the A400XLR Connector/Insert ...... **39.95**
MICROPHONE ACCESSORIES

MIC-SPECIFIC FOAM WINDSCREENS

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<th>MIC</th>
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<td>SM93</td>
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<td>SM94, 849, and BG4.1</td>
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Foam Windscreens for all Shure Ball Type Microphones

- Black Foam (A58WS-BLK) | 6.25
- Blue Foam (A58WS-BLU) | 6.25
- Gray Foam (A58WS-GRA) | 6.25
- Green Foam (A58WS-GRN) | 6.25
- Red Foam (A58WS-RED) | 6.25
- Yellow Foam (A58WS-YEL) | 6.25

Gooseneck Windscreens

- For Easyflex Gooseneck Mics (RPM 310) | 5.95
- For Easyflex Overhead Mics (RPM 312) | 5.95
- For Easyflex Overhead Mics (RPM 314) | 5.95
- High Performance Ball Foam Windscreen (A99WS) | 6.50
- Locking Metal Windscreen (A412MWS) | 19.95

Foam Windscreens & Clothing Clip

- For SM 1, SM 2, SM 10, SM 12, and SM 14 | 5.95
- For SM7A, SM7B, and SM7 | 5.95
- For SM81-LC | 6.50

Tan Foam Windscreens and Tie Clips (A3WS)

- For SM 93 (contains two of each) | 24.95

Micophone Accessories

- 3” Extension Tube for Desk Stands (A26X) | 8.95
- Small Black Desk/Table Stand (A202B) | 18.50
- Accessory Base (A412B) | 59.50
- Chrome Floor Stand (M5-10C) | 39.95
- Tripod Desk Stand (S40B) | 19.95
- Baby Boom Arm for MS-10C (BB77) | 29.95
- S15A Telescoping Mic Floor Stand | 157.50
- S37A Desk Stand | 26.95
- S39A Vibration-Isolation Stand | 62.95

For more information, please contact SHURE at 1-800-875-6951 or visit www.bhphotovideo.com.
**Tie Clips**

| Product                  | Description                            | Price  
|--------------------------|-----------------------------------------|--------
| RK183T1                  | Single Mount Tie-Clip (RK183T1) For M X183/184/185 (2 pc.) | $32.95 |
| RK183T2                  | Dual Mount Tie-Clip (RK183T2) For M X183, M X184 and M X185 | $14.95 |

**Mounts and Adapters**

| Product                  | Description                        | Price  
|--------------------------|------------------------------------|--------
| A26M                     | Dual Microphone Mount               | $39.95 |
| A32M                     | ShureLock Black Swivel Mount Adapter | $56.95 |

**Universal Microphone Drum Mount (A56D)**

Mounts a mic onto a drum. A screw on the mount secures the mic, and an adaptive brass washer (European insert) is available to accommodate an even wider range of microphone models. Flexible, sturdy rubber construction. Accommodates 5/8” Swivel Adapters. $37.95

**Drum Mount (A98D)**

Mounts the Beta 98/S or SM 98A mics on a drum. The gooseneck-adapter allows for optimum mic placement, and can be inserted into the horizontal or vertical slots of the clamp for positioning flexibility. The clamp is designed to fit drum rims measuring from ½” to 2½” in height, or on cymbal stands measuring from ¾” to 1¾” in diameter. $38.50

**Universal Horn Mount (A98KCS)**

Attaches the Beta 98/S or SM 98A to a horn, wind, or reed instrument in the exact position desired while protecting the instrument and its finish. The cushioned grip is manually tightened and securely clamps the rim of the horn. Non-marking neoprene rubber on the grip prevents marring the bell or its rim. A short 6½” goose-neck attached to the clamp terminates in a shock-mount adapter for the microphone. The gooseneck length can be adjusted to facilitate locating the microphone in precisely the desired position in the bell of a horn. A side screw locks the gooseneck in the chosen position. $49.50

**Swivel Adapter (RK282)**

Shock-mounted swivel adapter for SM 98A and Beta 98S microphones. $18.50

**A27M Stereo Microphone Adapter**

The A27M is a stereo microphone adapter designed to hold two mics in selectable positions for stereo broadcasting, recording or sound reinforcement. It allows two microphones to share one stand without losing independent positioning flexibility.

- Permits coincident or closely spaced mounting with a wide range of directional angles, and vertical microphone separations of 1½” (31.8 mm), 2½” (66.7 mm) or 4” (102 mm).
- The A27M consists of two vertically stacked sections that rotate on their centers. Each contains a 5/8”–27 threaded stud and locking ring to accept a variety of microphones. The bottom section contains a 5/8”–27 adapter for mounting on a mic stand. Includes cable clamp for holding mic cables. $59.95
A96F
Low- to Medium- Impedance Matching Transformer
Low impedance, female XLR to medium impedance 3.5mm mini-plug output connector with 18” cable. Adapts a balanced, low-impedance microphone to camcorder/ recorder input. Also has a DC Bias Filter .................................................................36.50

A95UF/ A95U
Low- to High-Impedance Mic Transformer
The A95UF and A95U provide 24 dB of voltage gain and may be used in reverse (high- to low- impedance). The A95UF comes with a balanced low impedance 3-pin XLR female input and the A95U comes with a balanced 3-pin XLR male low-impedance connector. An Amphenol M C1M-type output connector with mating 1/4” male phone plug and female phone jack adapt to a variety of high-impedance signals.
A95UF ...................................34.95 A95U ............................32.50

Problem Solvers
No matter how well you plan ahead, sooner or later you will probably run into an audio-related problem. For example, dealing with incompatible signals of a low impedance microphone and a high impedance mic input of a camcorder or eliminating the low end rumble picked up by a sensitive mic due to handling noise or even automobile traffic. Shure has developed a number of problem solving solutions to help you out in these types of situations and many others.

A120S Accessory In-Line Switch
Provides on/off, push-to-talk, cough button, and transmitter relay keying functions for wired mics.
• Convenient handheld size with belt clip
• For hardwired, in-line use with various cable diameters .........................................................24.95

A120S Accessory In-Line Switch
Provides on/off, push-to-talk, cough button, and transmitter relay keying functions for wired mics.
• Convenient handheld size with belt clip
• For hardwired, in-line use with various cable diameters .........................................................24.95

A15AS Switchable Mic Attenuator
Prevents preamplifier overload when strong signals are applied.
• Provides 15, 20, or 25 dB of microphone attenuation
• Requires use of balanced signals; XLR female in and XLR male out
• Passes phantom power ......................................................38.50

A15AS Switchable Mic Attenuator
Prevents preamplifier overload when strong signals are applied.
• Provides 15, 20, or 25 dB of microphone attenuation
• Requires use of balanced signals; XLR female in and XLR male out
• Passes phantom power ......................................................38.50

A15PRS Switchable Phase Reverser
Provides instant switch selection of normal or reversed phase of a balanced line without modification of equipment.
• Reverses polarity of pins 2 and 3 of a balanced line
• Slender, in-line XLR (F) to XLR (M) configuration; may be used in reverse
• Requires use of balanced signals........................................38.50

A15PRS Switchable Phase Reverser
Provides instant switch selection of normal or reversed phase of a balanced line without modification of equipment.
• Reverses polarity of pins 2 and 3 of a balanced line
• Slender, in-line XLR (F) to XLR (M) configuration; may be used in reverse
• Requires use of balanced signals........................................38.50

A15LA Line Adapter
Provides 50 dB attenuation, allowing a balanced line-level source to be connected to a balanced microphone input.
• Slender, in-line XLR (F) to XLR (M) configuration
• Requires use of balanced signals.........................................34.95

A15LA Line Adapter
Provides 50 dB attenuation, allowing a balanced line-level source to be connected to a balanced microphone input.
• Slender, in-line XLR (F) to XLR (M) configuration
• Requires use of balanced signals.........................................34.95

A15BT Bridging Transformer
Matches balanced or unbalanced devices of different impedances.
• 33 kOhm primary: 600 or 7500 ohm secondary; may be used in reverse
• Slender in-line XLR (F) to XLR (M) configuration...39.95

A15BT Bridging Transformer
Matches balanced or unbalanced devices of different impedances.
• 33 kOhm primary: 600 or 7500 ohm secondary; may be used in reverse
• Slender in-line XLR (F) to XLR (M) configuration...39.95
Lavalier Microphones

Sony's lavalier microphones are manufactured to meet the most demanding professional broadcast and recording requirements. They are designed to deliver the highest level of performance and reliability. There are five primary lavalier mics in the series, offering different sizes and applications. Additionally, they offer three big advantages over other systems.

High Performance

Sony's lavalier microphones are distinguished by their superior performance, as represented by the wide (20Hz~20kHz) frequency response of the top-of-the-line ECM-88. They will more than measure up to your expectations.

Wide Selection

Five models in the series, each finished in black plating. The ECM-88 is an extremely miniature, omni-directional electret-condenser mic designed for quality-critical applications in broadcasting, theater, and field productions. While slightly bigger, the ECM-77B is also incredibly small and light. The uni-directional ECM-66B is designed for close-miking of musical instruments. The popular ECM-55B incorporates a 10.6mm omni-directional capsule for versatility, while the ECM-44B offers high performance at a lower cost. There is also a full line of lavalier accessories available.

Reliability and Convenience

Increased reliability is another important plus for these mics. Careful attention is paid to make the capsule immune to external noise and adverse ambient conditions. The cable is strengthened to achieve a high resistance to damage caused by over flexing.

ECM-44B
Omni-directional Electret Condenser Mic

The ECM-44B makes the exceptional quality of Sony's electret condenser mics available for budget conscious productions, and a variety of sound reinforcement requirements, such as lectures and demonstrations. Measuring 8.5 x 14.5mm, the ECM-44B delivers clean, bright, yet natural reproduction. Complete with in-line battery for 2-way powering (battery or 48v phantom power). Operates on a single AA battery for over 5000 hours. Supplied with urethane windscreen and clip.

ECM-55B
Omni-directional Electret Condenser Mic

The ECM-55B is suitable for applications ranging from news and interviews to stage dramas and instrument pick-up. Frequency response is a wide 30Hz to 18kHz. Above 2kHz, there is a gentle rise in the response to give a touch of presence to any instrument, while offering crisp, clean voice quality without any masking effect when used as a lapel mic. Directivity is optimized to ensure uniform, dependable output, regardless of the direction of the sound source. The metal mesh windscreen effectively eliminates both wind noise outdoors and pop noise in close-up situations. May well prove to be your most versatile and useful lavalier microphone. Complete with in-line battery for 2-way powering (battery or 48v phantom power). Supplied with metal windscreen and metal holder clips.
ECM-66B Uni-Directional Electret Condenser Mic
A uni-directional miniature microphone developed specifically for recording musical instruments and voice when superb rejection of the ambient sound is desirable. The design of the ECM-66B yields clean, natural reproduction of musical instruments while maintaining excellent isolation from the acoustic environment. Unlike most miniature microphones, this mic has a uni-directional polar pattern, carefully contoured for better control of feedback. The higher voltage supplied to the microphone by the built-in DC-to-DC converter increases the maximum input sound pressure level to an amazing 130dB SPL. This special construction also complements the electret condenser design, resulting in excellent transient response and thus better tonal quality. Complete with in-line battery for 2-way powering (battery or 48v phantom power). Has a battery on/off switch to save power. An LED illuminates to show battery condition when the power is turned on.

ECM-77B Omni-directional Condenser Microphone
At only 1/4” x 1/2”, and a mere 0.04 oz. the ECM-77B is microscopic. Increased mechanical impedance using a metal vaporized, fine ceramic backplate provides the ECM-77B's exceptional 40Hz to 20 kHz frequency response. And, by design, the ceramic backplate assures resistance to humidity and temperature extremes for increased reliability. Combined with advanced techniques for sealing the capsule and advanced design for the acoustic housing, the ECM-77B delivers sound that is audibly superior and more pleasing than any other lavalier mic. Ideal for TV broadcasting and stage applications where the microphone must be inconspicuous, the ECM-77B enables unobtrusive miking plus also minimizes glare. Even when hidden inside a costume, its frequency response is wide enough to pick up the voice with no perceptible change in quality, while minimizing the pick-up of rustling noise.

ECM-88 Omni-directional Condenser Microphone
The ECM-88 is an extremely miniature, omni-directional electret-condenser microphone designed for quality-critical applications in broadcasting, theater, and field productions. It used a dual-diaphragm mechanism to achieve high-sensitivity, flat-and-wide frequency response and low noise characteristics, while offering great enhancements over the acclaimed ECM-77B. The diaphragm and back-plates are fixed vertically to the microphone capsule, which effectively reduces the mechanical noise caused by cable vibration and friction. Water-resistant architecture reduces the risk of water or perspiration entering the mic capsule. The mic capsule measures just 5/32 x 5/32 x 11/16” allowing for easy, natural-looking concealment in a stage costume. The ECM-88 includes two types of mic holders (double-pin and tie-clip) and a urethane windscreen. It is supplied with a Sony 4-pin connector (SMC9-4P) for use with the optional DC-78 power-supply or the WRT-8B/822B wireless bodypack transmitters. The optional DC-78 power supply has a 4-pin connector (SMC9-4P) input and XLR output. It can operate via 12- 48v external DC power or up to 5000 hours on a single AA battery.

<table>
<thead>
<tr>
<th>SONY MICROPHONE SPECIFICATIONS</th>
<th>ECM-44B</th>
<th>ECM-55B</th>
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<td>122dB SPL</td>
<td>126dB SPL</td>
<td>130dB SPL</td>
<td>≥130dB SPL</td>
<td>125dB SPL</td>
</tr>
<tr>
<td>Battery life</td>
<td>Approx. 5000 hrs.</td>
<td>Approx. 5000 hrs.</td>
<td>Approx. 300 hrs.</td>
<td>Approx. 5000 hrs.</td>
<td>Approx. 5000 hrs.</td>
</tr>
<tr>
<td>Sensitivity (0dB=1V/Pa,at 1kHz)</td>
<td>-53.0dB ± 3dB</td>
<td>-52.0dB ± 2dB</td>
<td>-50.0dB ± 2dB</td>
<td>-52.0dB ± 2dB</td>
<td>52 dB +/- 2 dB</td>
</tr>
<tr>
<td>Output impedance at 1kHz</td>
<td>250Ω</td>
<td>100Ω</td>
<td>100Ω</td>
<td>150Ω</td>
<td>100Ω</td>
</tr>
</tbody>
</table>

*(A weighted, 1kHz, 1 Pa.)
Tie Clips
For the ECM-44 (SOSC44) 14.95
For the ECM-77 (SOSC77) 14.95

Horizontal Single-Clip (10-Pack)
For the ECM-44 (SOSADH44B) .......... 73.95
For the ECM-55 (SOSADH55B) .......... 73.95
For the ECM-77 (SOSADH77B) .......... 73.95

Horizontal Double-Clip Pack (Pack of 6)
For ECM-55 (SADW55B) .................. Call
For ECM-77 (SADW77B) .................. Call

Black Windscreens
Urethane. For ECM-44 (SOWS44) ............ 17.95
Urethane. For ECM-77 (SOWSU77S) .......... 19.95
Metal. For ECM-77 (SOWSM77S) .......... 19.95

Urethane Windscreen (6 colors x 2 pc)
For ECM-77 (SOADC77) .................. 91.95

Metal Windscreen (Black, 6-Pack)
For ECM-66 (SOADR66B) .................. 94.95
For ECM-77 (SOADR77B) .................. 94.95

C-800G Pack
Tube Studio Microphone

Excellent for vocal recording in studios and film post production houses, Sony's C-800G studio tube condenser mic is designed for the highest possible sound reproduction quality. It features a high-quality dual diaphragm for true reproduction of vocal qualities, vacuum tube warm sound quality through a 6AU6 vacuum tube, a unique Peltier-based cooling system to achieve optimum tube operating temperature, and an electronically selectable pick-up pattern (Omni/Uni) for various recording applications. The package includes a power supply (AC-M C800G) and all necessary accessories.

- Suitable for vocal recording in studios and film post production houses
- Large diaphragm capsule
- High sensitivity of -33dB/Pa
- Electronically selectable directivity, either omni-directional or cardioid
- Low noise and low distortion due to built-in cooling system

ECM-670 / ECM-672
Shotgun Microphones

Compact and lightweight, the 9˝ ECM-670 and 12˝ ECM-672 are high-performance, electret condenser super-cardioid shotgun-type microphones designed for use on portable video cameras such as Sony's Betacam and DXC series. Tailor-made for ENG applications, they also offer versatility in applications such as interviews, sound reinforcement and speech. Superb controlled directivity assures rejection of ambient and camera noise, while the supplied windscreen reduces wind noise and provides pop protection during extra close miking.

ECM-670
- Low-cut switch provides a low frequency roll-off for optimum voice pick-up reducing pop and wind noises.
- Powered by external power supply (12-48v DC) via an XLR connector.
- Includes windscreen, mic holder, mic spacer and 2 stand adapters.

ECM-672
- A 2-position low-cut switch further contributes to the mic's low noise level and emphasizes desired sound sources by eliminating boominess in the low range.
- Powered by 12-48v DC power supply or via AA battery (up to 3000 hours of operation).
- Includes a windscreen
ECM-999
Stereo Electret Condenser Mic

With a selectable stereo image, AA battery operation, and a built-in low cut switch, the ECM-999 is ideal for a multitude of recording and broadcasting applications. It also features a single-point stereo pickup and an MS design with 3 electret condenser capsules for stereo recording with a single microphone.

- Electret condenser microphone with back-electret condenser capsules permits good sound pick-up.
- Mid/Side system: The sum of signals of the mid microphone unit (uni-directional) and side microphone unit (bi-directional) and the difference between them are used for R and L channels respectively. The Mid/Side system is employed to give excellent sound image and faithful stereo sound reproduction with less “hole in the middle”.
- The directive angle between the left and right channels can be changed progressively from 0° (monaural) to 150° according to the sound source.

ECM-MS957
One-Point Stereo Mic

Incorporating a sensitive electret condenser mic, a rotating mid-capsule and Mid/Side switch, the ECM-MS957 is designed for high-quality instrument recording. Ideal for use with Minidisc and DAT recorders, it also features a wide frequency response, superb dynamic range, and an XLR connector.

- Mid/Side (MS) capsules for natural stereo panorama; the Mid capsule picks up monophonic sound while the Side capsule picks up left/right difference sound; subtracting and adding the two capsule signals yield separate.
- The mid-capsule rotates to adjust the stereo pick-up pattern for the widest range of recording situations.
- Mid/Side (MS) switch selects pickup angle between left and right channel; choose 90° for a single voice or instrument or 120° to pick up many voices and instruments, arranged across the stage.
- XLR connector for secure and reliable, low-noise connection.
- Supplied accessories include detachable cable, stand, holder, wind-screen and carrying case.

F-Series Dynamic Microphones

F-710
Low cost, multi-purpose dynamic handheld mic with high sonic quality and high sensitivity. Suitable for voice and instrument pickup, the mic’s Neodymium magnet offers high output. On/off switch.

F-720
Rugged dynamic hand-held cardioid mic with a built-in LC switch. Replaceable capsule. Efficient one-piece shock mounting to protect the capsule from external noise and vibration. Integral double windscreen to prevent pop/wind noise. Reasonably priced to suit both professional and institutional applications. Black finish.

F-740/9X
Designed for critical live vocal and instrumental reproduction, the F7409X features an improved capsule design for enhanced audio performance, as well as a AlNiCo magnet assembly and CCAW (Copper Clad Aluminum Wiring) voice coil for very crisp, clean, transparent sound.

- Low handling noise
- Superb sound quality and high sensitivity
- Extremely durable design

F-780/9X
A perfect choice for critical live vocals or where high-quality, rugged reliability, and resistance to feedback are required. Improved sonic and mechanical characteristics make the F-780/9X a must have for professionals in the music and recording business.

- Rigid structure allows easy movement of capsule for higher sensitivity and reduced mechanical noise
- Urethane coating for extremely low handling noise
<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Pages</th>
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<tr>
<td>Gator</td>
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<td>Atlas Sound</td>
<td>174-177</td>
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<td>Clamp On</td>
<td>177, 193</td>
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<tr>
<td>Ultimate</td>
<td>178</td>
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<td>Konig &amp; Meyer</td>
<td>179-181</td>
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<td>O.C. White</td>
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<td>Rycote</td>
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<td>Van Den Berg</td>
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<td>Windtech</td>
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<tr>
<td>Sabra Som</td>
<td>192</td>
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<td>PSC</td>
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<td>Beachtek</td>
<td>194</td>
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<tr>
<td>Sign Video</td>
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</tbody>
</table>
GM-4
Padded Bag for 4 Microphones and Cables
The GM-4 is the perfect carrying case featuring 4 form fitted foam microphone drops and a slot for a belt pack. The exterior has a large dual pocket for cables and accessories. The case comes with a comfortable top carrying strap as well as a shoulder strap. Made from 600 Denier Ballistic Nylon, this case is made for heavy usage at an affordable price.

GM-15
Professional 15 Drop Microphone Case
The GM-15 is constructed from military grade Polyethylene and features recessed Zinc-plated twist latches, padded handle, and triple-plated Chrome corners. It is designed to take the beatings of a band-on-the-road hitting 70 venues in 18 countries. The interior has 15 microphone drops that are formed with thick foam to insure maximum protection plus a generous area for cables, belt packs or accessories. Lockable and affordable – what a concept!

GM-6
Molded Plastic Case with Six Microphone Drops
Gator’s GM-6 microphone case is molded from ABS plastic and is lined with thick die-cut foam to fit six microphones. The durable latches are lockable and triple chrome plated.

GX-33
Microphone/Stand Bag
The GX-33 has 3 separate compartments for tripod-type mic stands as well as 5 form-fitted mic drops. Both bags are constructed of 600 Denier Nylon, have 2 webbed handles and a carrying strap.

<table>
<thead>
<tr>
<th>MIC CASE DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
</tr>
<tr>
<td>Length</td>
</tr>
<tr>
<td>GM-4</td>
</tr>
<tr>
<td>GM-6</td>
</tr>
<tr>
<td>GM-15</td>
</tr>
<tr>
<td>GX-33</td>
</tr>
</tbody>
</table>
Synonymous with durability and quality, Atlas is the world recognized leader for cast-base and tripod style floor stands, desk, and studio boom stands; boom attachments; loudspeaker/equipment stands; and over 40 adapters and fittings. The unique selection, developed over the past 60 years, offers the professional musician, performer, educator, and lecturer great flexibility in choosing models that satisfy unique application, performance, and budget requirements. Classic styling in mirrored chrome or non-reflective ebony epoxy (perfect for video application) combine with the famous Atlas Sound wear-proof clutches to provide attractive, durable, and reliable service for all types of communication and entertainment applications.

MS Series Microphone Floor Stands

Your microphone is a valuable investment, so why trust it to a cheap stand. Manufactured with fine U.S. craftsmanship, Atlas stands are simply built better. Each clutch is made of a wearproof, three piece construction. The bases and housings are high-stability cast metal, and the tubings are finished in ebony or mirrored chrome. With more than 60 years of performance, both on-stage and off-stage, these stands are proven performers. And with 12 models to choose from, Atlas offers the widest selection of floor stands available.

MS-10C / MS-10CE
All-Purpose Floor Stands
The cost-efficient MS-10C (chrome finished tube) and MS-10CE (ebony finished tube) assemblies are the most popular stands in the world for dependable performance in music, entertainment, business, education, and social functions. Stability is provided by the circular cast iron ebony base.

MS-10C ........28.50  MS-10CE ........28.50

MS-12C / MS-12CE
Professional, Full-Height Stands
These all purpose stands feature the same wearproof clutch and high-quality craftsmanship as the MS-10 series with the beauty of a lower profile base section.

MS-12C ..........28.50  MS-12CE ......28.50

MS-4 / MS-4E / MS-43 / MS-43E
Fully Adjustable Three-Section Stands
These versatile stands adjust from 25” to 65” to meet the needs of seated and standing instrumentalists and performers. Model includes three-section chrome (MS-4/M-43) or ebony tubed (MS-4E/MS-43E) assembly with two wearproof clutches for optimum vertical height adjustment and high stability. The MS-4 Series has a low-profile cast iron base finished in ebony (diameter of 10”, weighs 6 lbs), while the the MS-43 Series base is 12” in diameter and weighs 8 lbs. (also finished in ebony).

MS-4 ..............69.95  MS-4E ............69.95
MS-43 ..............69.95  MS-43E ............69.95

MS-20/ MS-20E
Extra-Stable Stands with Oversized Base
Heavy-duty stands for studio, recording, church and school applications, the MS-20 (chromed finish tube) and MS-20E (ebony finished tube) include an extra-height 1¾” diameter tube assembly with wearproof clutch, top adapter, and low contour high-stability cast iron ebony base.

MS-20 ..................59.95  MS-20E ..................57.95

MS-25 / MS-25E
Studio Stands with Air Suspension System
The MS-25 (chromed finish tube) and MS-25E (ebony finished tube) are heavy-duty studio recording stands featuring a 1¾” diameter tube assembly with integral air suspension system to protect sensitive microphones. Triangular cast base includes sculptured sides, ebony finish, and decorative chrome cover.

MS-25 .................89.95  MS-125E ..........89.95
**TL34E Performer Series Tripod Stand**
The TL34E features a durable, all-metal housing with a unique double-cam locking device and Glide'n Lock legs for secure positioning and convenient transportation/storage. The wearproof Atlas clutch withstands years of stage and studio handling, while the high-density rubber feet will reduce mechanical noise to the microphone. 2-piece adjustable tubing (34”–63”H) terminates in the standard 5/8”-27 thread pattern. Non-reflective ebony epoxy finish .........................................46.50

**TL34-BBE/ TL34-15E/ TL34-21XE**
Performer Series Tripod/Boom Combinations
Tripod/boom stands offer maximum ease and portability. Packages include the patented TL34E Performer Series tripod with either a 34” economy boom, or a choice of Performer Series booms: 34” or 25½ - 38½”. Packages are finished in ebony epoxy. The Performer Series booms feature the patented all-metal swivel clamp with Glide'n Position tubing, nylon brake bushings and wool washers. There is also a 3/4 lb. counterweight for balance, and steel T-bar knob for no-fail locking.

- **TL34-BBE** TL34E tripod with 34” BB-77E economy boom .................................73.50
- **TL34-15E** TL34E tripod with 34” PB15E Performer Series boom .....................89.95
- **TL34-21XE** TL34E tripod with 25½-38½” PB21XE Performer Series boom ............99.95

**TE-E Musician Series Tripod Stand**
Lightweight, professionally styled stand with the fit and feel of tripod costing much more. Features full-height extension (37 to 65”) to meet versatile miking needs, a three-piece clutch with protective insert & metal clutch barrel for secure and scratch-free positioning, and easy-locking legs that tighten with a single motion of the metal leg attachment “cup” for fast set-up and teardown. Durable tripod legs attach to a metal retainer assembly that includes a thumbscrew/brake system to provide secure positioning and prevent tube marring. Tube assemblies are durable CRS construction terminated in 58”-27 thread pattern. Satin ebony finish.

- **TE-E** Tripod Stand (5-1/2 lbs) ..............................................29.95

**TEB-E Tripod/Boom**
Features the TE-E stand with the removable BE-E telescopic boom to provide microphone extension from 24 to 39”. The boom includes a molded plastic handle, metal swivel clamp with protective rubber inserts, and an easy-grip knob for vertical alignment. Adjustment for the main and extension boom include a thumbscrew/brake system to provide secure positioning and prevent tube marring Tube assemblies are manufactured of CRS and terminate in 58”-27 thread pattern. Satin Ebony finish.

- **TEB-E** Tripod Stand/Boom (7½ lbs) .................49.95

**DS-5 / DS-5E General Purpose Stands**
These fixed-height stands include traditional, circular cast iron base and choice of chrome or ebony tubing finish. Stands are suitable for application with any standard microphone.

- **DS-5** Chrome finish .........................9.95  
- **DS-5E** Ebony finish .........................9.95

**DS-2 Vibration Isolating Stand**
A low-silhouette stand, the DS-2 features an integral tension mount to reduce conductivity of external mechanical vibrations. High-stability metal base with protective pads includes notched area for convenient placement of cards or pens. Fixed-height tubing is chrome finished. Base is ebony .................24.95

**DS-7 / DS-7E Adjustable Stands**
These versatile stands have a vertical height adjustment from 8” to 13” and include weerproof clutch and ebony finish cast iron base.

- **DS-7** Chrome finish .......................16.50  
- **DS-7E** Ebony finish .......................16.50
ATLAS SOUND

MIC STANDS AND BOOM ARMS

STUDIO BOOM STANDS

SB-11WE Economical Studio Boom
An economical studio boom, the SB-11WE is especially suited for small studio/broadcast applications and for stage miking of drums and percussion instruments. Unit features a 60” long, two-piece horizontal boom assembly. Boom includes a Performer Series swivel clamp and an adjustable 2 lb. counterweight for effortless boom arm orientation. Tubing incorporates a 90° angled end for optimum microphone positioning and terminates in the standard 5/8”-27 thread pattern. Stand features an Atlas Sound wearproof clutch for positive locking control. Triangular die-cast base offers extra stability and is equipped with hard rubber swivel casters for effortless and silent mobility. Finish is non-reflective ebony epoxy ............149.95

SB-36W Professional Studio Boom S
A heavy-duty stand for stage and studio applications, the SB-36W includes an integral piston-type air suspension system for effortless height adjustment and microphone protection.

◆ Equipped with a two-piece horizontal chromed-tube assembly, adjustable 6 lb. boom counterweight, heavy-duty gyromatic swivel, Atlas wearproof clutch, and triangular cast iron base
◆ Includes silent-motion, ball-bearing swivel casters of hard rubber for friction-free and vibration-absorbing mobility
◆ Tubing terminates in the standard 5/8” - 27 thread pattern, and supplied with guide clips for microphone cable attachment. Tubing is finished in chrome; base is ebony epoxy with a chrome cover
SB-36W Includes wheels for a height span of 49”-73” 199.95

BOOM ATTACHMENTS

Performer Series booms are manufactured in the U.S. to the highest quality standards, and they combine exceptional styling with a unique, all-metal swivel clamp for greater flexibility. Clamp features Glide’n Position tubing with nylon brake bushings for smooth horizontal adjustment. Resilient washers are made from compressed virgin wool fiber (in lieu of rubber) to offer quiet and secure positioning even after years of use. Extra-strength, steel T-bar knob assures no-fail locking with simple one-hand adjustment in the vertical plane. All versions include counterweights for increased balance and stability. All clamps are finished in non-reflective ebony epoxy. Tubing is manufactured of CRS and terminates in the standard 5/8”-27 thread pattern.

PB11X / PB11XE Mini Adjustable Boom
Compact booms extend from 16½” to 24½” with a single motion—perfect for drum/piano/guitar amp and short distance miking. Units include a threaded end cap and a fixed 3/4 lb. counterweight for stability.
PB11X Chrome.................................39.50
PB11XE Ebony epoxy............................39.50

PB15 / PB15E Fixed Length Booms
All-purpose, high-quality booms are 34” long and include fixed 3/4 lb. counterweights for stability.
PB15 Chrome.....................................32.95
PB15E Ebony epoxy...............................32.95

PB21X / PB21XE Extendable-Length Booms
Booms extend from 25¼” to 38½” with a single motion and are suitable for a wide variety of miking applications. Units contain a fixed 3/4 lb. counterweight and threaded end cap.
PB21X Chrome.................................39.95
PB21XE Ebony epoxy............................39.95

BE-E
Musician Series Extendable Length Boom
Versatile, low-cost BE-E boom has adjustable-length positioning for extended microphone range applications. Two-piece boom extends 24-39”. The boom includes a molded plastic handle, metal swivel clamp with protective rubber insert, and an easygrip knob for vertical alignment. Adjustment for the main and extension boom include a thumbscrew/brake system to provide secure positioning and prevent tube marring.
BB-E Satin Ebony (2-1/2 lbs.) ...............24.95

BB-77 / BB-77E
General Purpose Fixed-Length Booms
Basic, multi-purpose 34” booms, they feature a fixed 3/4 lb. counterweight, thread-on die cast swivel, single-action positive locking, and new easy-grip knob for positioning control. Ideal for application with floor stands or accessory components.
BB77 Chrome finish ............................19.95
BB77E Ebony epoxy .............................19.95
Atlas offers the industry's largest selection of problem-solving microphone adaptors, extensions, fittings and flanges for use with floor, desk, loudspeaker, and studio boom stands.

**Gooseck Flexible Extensions**
6, 13, and 19” flexible goosenecks attach to any mic stand or adapter with 5/8”-27 male and female threads. Inside diameter is .338”.

**GN-6** Chrome finish. 6” gooseneck ...............4.95

**GN-6E** Ebony finish. 6” gooseneck ...............4.95

**GN-13** Chrome finish. 13” gooseneck .............6.95

**GN-13E** Ebony finish. 13” gooseneck .............6.95

**GN-19** Chrome finish. 19” gooseneck .............7.95

**GN-19E** Ebony finish. 19” gooseneck .............7.95

**LO-2B Clip-Mounting Microphone Accessory**
Lock-On accessory, respectively, allow fast connection and disconnection of plastic mic clamp holders and boom attachments with 5/8”-27 threads for safe transportation.

**LO-2B Chrome.** 13.50 **LO-2BE Ebony.** 13.50

**TM-1** Versatile mic mount for live sound and stereo recording. Mounts two or three mics onto any stand. Unit is 8 1/4” wide and fits mic clamps with 58” receptacles. Available in chrome or ebony.

**TM-1 Chrome.** 14.95 **TM-1E Ebony.** 14.95

**US-2** Flange-mounting, multi-purpose mic support includes 12 3/4” L boom on a spring-loaded swivel with 180° vertical cable feed-thru. Mounts mics to lecterns, consoles, tables, and desks.

Chrome finish .................49.95

**VM-2** Durable shock-mount accessory reduces external mechanical vibration pick-up. Die-cast unit can be left on a stand during transit unlike similar plastic accessories. Fits 5/8”-27 threaded mics and mounts between the top tube of a 5 1/8”-27 threaded stand and the mic clip. Chrome finish ......................19.95

**BC-1** Multi-Purpose Clamps
Bracket-style surface clamp with 6” high chrome tube attaches to tables, desk, keyboard stands, and countertops for mounting mic and accessory items with standard 58” threads ..................19.95

**CO-1B** Connect-on swivel adapter/clamp provides for the addition of a second mic with standard 5/8”-27 threads to any floor or desk stand with 58” or 78” diameter tubing. Ebony finish .................................................14.95

**MAC-1** Multi-use adapter/clamp holds mics, boom, or accessories having 5/8”-27 threads in vertical or horizontal orientation. Versatile unit also clamp mounts to 58”, 78”, and 1 3/4” diameter tubing or to freestanding instruments, keyboards, and drums. Made of high-strength extruded aluminum. Ebony finish. Weighs 1.5 lbs..........................34.95

**CH-1B** Cable/Tambourine Hangers and Cable Feed-Thru Adapter
Versatile accessory can hang cabling or a tambourine. Single screw-mounting assembly fits all tube assembly sizes.

**CH-1B Chrome.** 14.95 **CH-1BE Ebony.** 14.95

**AD-15B** Chrome 4” cable feed-thru adapter with standard 58” male and female threads.........9.95

**CLAMP-ON Mic-Eze**
Made of nylon with glass, each Mic-Eze model features lockable clamp design, while the clamp opens to 2 inches. They weigh 2 oz. and fit in the palm of your hand. Telescopic arm extends 1/4” or 3”, and their arm swings toward clamp 180°.

**M-1** Patented mic placement design enables drummers to mic their drum set using their personal choice of mic without the need of mic stands. Simply clamp and lock to rims and stands................................................17.95

**M-1E3** Modified version of the M-1. A male threaded 3” extension arm is perpendicular to the clamp..................24.95

**M-1E5** Same as above with 5” extension arm........24.95

**M-3E3** The versatility of this model sets the 3” extension arm vertically with the clamps in either a vertical or horizontal plane. The flexible arm can bend in any direction ...........................................24.95

**M-3E5** Same as above with 5” extension arm........24.95

**M-1A-E3** A 3” male extension arm runs in line with the clamp and can swing and bend in all directions........24.95

**M-1A-E5** Same as above with 5” extension arm........24.95

**M-2** Heavy duty mic holder that threads to the base models or any mic stand ....................................17.95

**M-4** Heavy duty spring action microphone holder that holds any size microphone...............................17.95

**FE-3** Dual perpendicular clamp set with a 3” flexible center that can bend in any direction ..................34.95

**FE-5** Same as above with a 5” flexible center ........34.95

**Min-Eze** Dual perpendicular clamp set with a trapeze style center attachment. Very popular for the congo drum ..................................................34.95

**Mac-Eze** Dual vertical clamp arrangement with a short center attachment .............................................34.95

**PB (Piggy Back)** M mounts mics to mics for dual feed and adjusts for phase cancellation. Dual vertical in-line clamp set with a swing type center attachment ........34.95
ULTIMATE
MICROPHONE STANDS

MC-05B Round Base
- Proven clutch design for easy adjustment and reliable locking
- Easy and comfortable adjustments
- Traditional, sturdy, cast-iron base
ULMC05B ................................................ 19.95

MC-07B Liberty
Same as MC-05B plus:
- Cut-out design allows six stands in the footprint of one - less than 1 square foot of floor space
- Heavy base is tip resistant
ULMC07B ................................................ 27.95

MC-77B Freedom
- Unique one-hand clutch lets you adjust height with a quick squeeze to easily raise or lower the mic
- Cut-out design allows six stands in the footprint of one - less than 1 square foot of floor space
- Heavy base is tip resistant
ULMC77B ................................................ 54.50

MC-66B One-Hand
- Unique one-hand clutch lets you adjust height with a quick squeeze to easily raise or lower the mic
- Durable lightweight aluminum construction makes a very portable stand
- Tripod legs fold up and lock for compact transport
ULMC66B ................................................ 72.50

MC-05 Round Base Stand

STACKING STANDS
The cut-out of the cast iron base allows six MC-07B or MC-77B’s to stack in the footprint of one. Each stand interlocks with the one underneath for convenient transport and storage.

MMB-962B Mini Mic Boom
The 9½” mini boom is the perfect accessory to any Ultimate mic stand.
MMB-962B Standard threads
MMB-962B Metric threads

MC-11B Low-Level Stand
Telescoping stand with lightweight and portable glass-fiber reinforced resin base and telescoping boom. Black finish. It’s height is 19” - 46”, it weighs 3 lbs. 7 oz., and has a boom length of 16” - 29”

ONE-HAND CLUTCH
The one-hand clutch on MC-66B and MC-77B make these mic stands one of the most innovative, yet easy stands on the market. Simply squeeze the clutch, releasing the internal friction mechanism, and set your height. Let go of the clutch and the internal lock engages for a secure and reliable adjustment.

<table>
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<th>MICROPHONE STANDS</th>
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<td><strong>Height</strong></td>
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<td>MC-05B</td>
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<tr>
<td>MC-07B</td>
</tr>
<tr>
<td>MC-77B</td>
</tr>
<tr>
<td>MC-66B</td>
</tr>
</tbody>
</table>
**Mic Stands**

Quality tripod base mic stands allow you to mix and match with the boom of your choice.

**Height Adjustment**

Proven clutch design for easy adjustment and reliable locking.

**Heavy Duty Construction**

Heavy gauge steel stand is very stable.

**Durable Finish**

Plastic inserts prevent metal-to-metal contact and protect the finish.

**Folds Easily and Compactlty**

**Sturdy Base**

Stands with cast alloy sockets have stress-absorbing inserts to protect legs, reduce vibration and increase stability.

<table>
<thead>
<tr>
<th><strong>Stand</strong></th>
<th><strong>Finish</strong></th>
<th><strong>Height</strong></th>
<th><strong>Weight</strong></th>
<th><strong>Boom Length</strong></th>
<th><strong>Base Diameter</strong></th>
<th><strong>Price</strong></th>
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</thead>
<tbody>
<tr>
<td>KM21020B</td>
<td>Black</td>
<td>35 1/2 - 64 1/2”</td>
<td>7 lb. 4 oz.</td>
<td>32”</td>
<td>27”</td>
<td>59.95</td>
</tr>
<tr>
<td>KM21060B</td>
<td>Black</td>
<td>35 1/2 - 64 1/2”</td>
<td>7 lb. 4 oz.</td>
<td>32”</td>
<td>27”</td>
<td>57.95</td>
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<tr>
<td>KM21080B</td>
<td>Black</td>
<td>35 1/2 - 64 1/2”</td>
<td>7 lb. 4 oz.</td>
<td>18 - 32”</td>
<td>27”</td>
<td>49.95</td>
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<tr>
<td>KM25600B</td>
<td>Black</td>
<td>37 - 65”</td>
<td>8 lb. 5 oz.</td>
<td>23 - 37”</td>
<td>28”</td>
<td>106.50</td>
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<tr>
<td>KM27105B</td>
<td>Black</td>
<td>35 1/2 - 63 1/2”</td>
<td>5 lb. 2 oz.</td>
<td>32”</td>
<td>27”</td>
<td>49.95</td>
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<tr>
<td>KM27105N</td>
<td>Nickel</td>
<td>35 1/2 - 63 1/2”</td>
<td>5 lb. 2 oz.</td>
<td>32”</td>
<td>27”</td>
<td>49.95</td>
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<tr>
<td>20130B</td>
<td>Black</td>
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<td>6 lb.</td>
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<tr>
<td>21060B</td>
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<td>21090B</td>
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<td>18 - 30”</td>
<td>28”</td>
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<tr>
<td>21090C</td>
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<td>35 1/2 - 65”</td>
<td>7 lb. 10 oz.</td>
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<td>28”</td>
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<td>59.95</td>
</tr>
<tr>
<td>25600B</td>
<td>Black</td>
<td>37 - 65”</td>
<td>8 lb. 5 oz.</td>
<td>23 - 37”</td>
<td>28”</td>
<td>106.50</td>
</tr>
<tr>
<td>26500B</td>
<td>Black</td>
<td>35 1/2 - 65”</td>
<td>8 lb. 5 oz.</td>
<td>23 - 37”</td>
<td>28”</td>
<td>106.50</td>
</tr>
</tbody>
</table>

Mic Stand and Boom Packages

The heavy-duty K&M Mic and Boom packages have a durable finish and feature rubber washers and easy-to-grip knobs that fasten booms securely. The stands with cast-alloy sockets have stress-absorbing inserts to protect legs, reduce vibration and increase stability.
KONIG & MEYER
MICROPHONE STANDS

TABLE TOP MIC STANDS
TRIPOD BASE FLOOR STANDS WITH EXCEPTIONAL STABILITY

As with all K&M Mic Stands, these stands feature a proven clutch design for easy adjustment, a heavy gauge steel stand, plastic inserts to prevent metal-to-metal contact and stress-absorbing inserts to protect legs, reduce vibration and increase stability.

SPECIALTY MIC STANDS
HARD-TO-FIND MIC STANDS FOR SPECIALTY APPLICATIONS

Available separately. Order the KM 21411B and the KM 21231B for the complete package.
The quality you expect from K&M microphone booms so you can mix and match with the stand of your choice.

**Mic Booms**

**KM 25500B** - Fixed height stand complete with extra-long telescoping boom. Can be used as a conventional upright stand.

**KM 25901B** - For bass drums or special use. Cast alloy base with folding legs. Comes complete with fixed length boom.

**25900B** - Telescoping stand and telescoping boom for bass drums or special use.

**25910B** - Bass drum stand and fixed length boom.

**KM 25910B** - Bass drum stand and fixed length boom.

**KM 25910B/C** - Bass drum stand and fixed length boom.

**KM 21100B** (Black) - 33” Fixed length boom with counter weight (1 lb. 10 oz.) .......................26.50

**KM 21100B/C** (Black/Chrome) - 18” - 30” telescoping boom with counter weight (1 lb. 10 oz.) ......................Call

**KM 21110B** (Black) - 31” Fixed length boom with counter weight (1 lb. 14 oz.) .........................22.50

**KM 21120B** - 22” - 38” extra long telescoping boom with counter weight (1 lb. 14 oz.)...29.95

**KM 21130B** (Black) - 31” Fixed length boom with counter weight (1 lb. 14 oz.) .........................22.50

**KM 22110B** - 5” tube with a 3” diameter ......................18.95

**KM 221130B** - 1½” tube with a 3” diameter. Lateral mount for gooseneck and hole for cable passage18.95

**KM 22140B** - 1½” tube with a 3” diameter ......................8.95

**KM 21120B** - 1½” tube with a 3” diameter. Lateral mount for gooseneck and hole for cable passage18.95

**KM 21130B** - 1½” tube with a 3” diameter. Lateral mount for gooseneck and hole for cable passage18.95

**KM 22140B** - 1½” tube with a 3” diameter ......................8.95

**Metal Flanges**

Mounts to any flat surface.

**KM 22110B** - 5” tube with a 3” diameter ......................18.95

**KM 22130B** - 1½” tube with a 3” diameter. Lateral mount for gooseneck and hole for cable passage18.95

**KM 22140B** - 1½” tube with a 3” diameter ......................8.95

**Mic/Accessory Mounting Arms**

**KM 24050B** - 10” arm attaches to round or flat surfaces up to 2¾”. Angle adjustable. Weighs 1 lb. 29.95

**KM 24010B** - 12” arm attaches to stands with a prism clamp locking assembly. Complete with 22” boom arm that adjusts and swivels. Weighs 2 lb. ...................33.95

**Threaded Adapters**

**KM 21500N** - 1/2” & 3/8” female to 5/8” - 27 male ...........2.95

**KM 21600N** - 5/8” - 27 female to 3/8” male ..................3.95

**KM 21700N** - 3/8” female to 5/8” - 27 male .................2.95

**KM 21800N** - 1/2” female to 3/8” male .....................2.95

**KM 21900N** - 3/8” female to 1/2” male .....................2.95

---

**Mic Bars and Holders**

- 8” Mic Bars
  Available straight or hinged. Connect to the top of mic stands. Holds 3 mics or booms.
  - KM 23500B - 8” straight bar .........................14.95
  - KM 23510B - 8” hinged bar .........................18.95

- 16” Mic Bar (23600B)
  Similar to the 23500B, but holds 5 mics ........26.50

- Mic Holder (23800B)
  Attaches microphones to sheet music stands or microphone stands up to 1” diameter ..........14.95

---

**Low Level Floor Stand Packages**

**25900B**

**25910B**

**25500B**

---

**22300N**

<table>
<thead>
<tr>
<th>Length</th>
<th>16”</th>
<th>12”</th>
<th>12”</th>
<th>9”</th>
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<tbody>
<tr>
<td>Diameter</td>
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<td>5/8”</td>
<td>5/8”</td>
<td>1/2”</td>
<td>1/2”</td>
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**22400N**

<table>
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<th>16”</th>
<th>12”</th>
<th>12”</th>
<th>9”</th>
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<tbody>
<tr>
<td>Diameter</td>
<td>5/8”</td>
<td>5/8”</td>
<td>5/8”</td>
<td>1/2”</td>
<td>1/2”</td>
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<tr>
<td>Finish</td>
<td>Nickel</td>
<td>Black</td>
<td>Nickel</td>
<td>Black</td>
<td>Nickel</td>
</tr>
<tr>
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<td>18.50</td>
<td>16.95</td>
<td>16.95</td>
<td>14.95</td>
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**22400N**

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<th>12”</th>
<th>9”</th>
<th>9”</th>
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<tbody>
<tr>
<td>Diameter</td>
<td>5/8”</td>
<td>5/8”</td>
<td>5/8”</td>
<td>1/2”</td>
<td>1/2”</td>
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<tr>
<td>Finish</td>
<td>Nickel</td>
<td>Black</td>
<td>Nickel</td>
<td>Black</td>
<td>Nickel</td>
</tr>
<tr>
<td>Price</td>
<td>18.50</td>
<td>16.95</td>
<td>16.95</td>
<td>14.95</td>
<td>14.95</td>
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**22600N**

<table>
<thead>
<tr>
<th>Length</th>
<th>16”</th>
<th>12”</th>
<th>12”</th>
<th>9”</th>
<th>9”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>5/8”</td>
<td>5/8”</td>
<td>5/8”</td>
<td>1/2”</td>
<td>1/2”</td>
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<tr>
<td>Finish</td>
<td>Nickel</td>
<td>Black</td>
<td>Nickel</td>
<td>Black</td>
<td>Nickel</td>
</tr>
<tr>
<td>Price</td>
<td>18.50</td>
<td>16.95</td>
<td>16.95</td>
<td>14.95</td>
<td>14.95</td>
</tr>
</tbody>
</table>
**ProBoom Elite Mic Arms**

Offering the ultimate in ease-of-installation and aesthetics, the ProBoom Elite Series supports most modern studio mics. Mic cables are almost completely hidden in the provided wire channel by a zip top cap, yet are easily installed – with connectors attached. Music wire springs offer maximum holding power and minimum noise. ProBoom Elite Series come in overall extended lengths of 29” or 45”, and are available as a set, or with arm and riser separately.

- **61900-BG**: 29” black mic arm with riser, gold springs $199.00
- **61900**: 29” beige mic arm with riser, chrome springs $199.00
- **14295-BG**: 29” black mic arm without riser, gold springs $129.00
- **14295**: 29” beige mic arm without riser, chrome springs $129.00

**Deluxe Series Ultraflex Mic Arm**

The industry-standard spring-counter-weighted Mic Arm is at home in production and control rooms, announcer’s booths, and for voiceover situations. Constructed for years of trouble-free use, it offers a silent operation. It has an overall extended arm reach of 29” and weighs 4 lbs. Supports most microphones without irritating spring changes. Accepts optional heavy-duty springs. (mount sold separately)

- **14194**: Deluxe Series Ultraflex Mic Arm $99.00

**Deluxe Series Ultraflex Mic Arm With Riser**

This package adds 12” of vertical height to a 14194 Mic Arm by combining it with a 14100 Riser Accessory. Permits placement of studio equipment (up to 10.5” high) in close proximity to the arm, without obstructing movement. Weighs 5 lbs.

- **51900**: Deluxe Series Ultraflex Mic Arm With Riser $149.00

**Deluxe Series Extra-Reach Two-Joint Ultraflex Mic Arm With Riser**

A double-jointed mic arm with a reach of a full 46”. Includes the 14100 Riser Accessory. Arm weighs 9 lbs.

- **52900**: Deluxe Series Extra-Reach Two-Joint Ultraflex Mic Arm With Riser $179.00

**Deluxe Series Special-Length One-Joint Ultraflex Mic Arm**

Popular in sophisticated studio integrations, it offers a totally-extended reach of up to 45”. Weighs 5 lbs.

- **14192**: Deluxe Series Special-Length One-Joint Ultraflex Mic Arm $129.00
### Deluxe Series Ultraflex Talk-Show Roundtable Assembly

The easy way to accommodate multiple microphones in talk and roundtable broadcasts and webcasts. This combination includes three 14194 Deluxe Series Ultraflex Mic Arms and a TMA triple arm cast-iron mount. Weighs 17 lbs.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>51900-3</td>
<td>Deluxe Series Ultraflex Talk-Show Roundtable</td>
<td>367.00</td>
</tr>
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</table>

### Wall Mount

Securely mount this heavy-construction bracket to the wall and you have the perfect match for mounting the O.C. White range of Mic Arms. Weighs 1 lb.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>11426</td>
<td>Wall Mount</td>
<td>22.00</td>
</tr>
</tbody>
</table>

### Bench, Table and Counter-Top Mount

Screws into place on counter top for permanent Mic Arm placement. Weighs 2 lbs.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>11427</td>
<td>Bench, Table and Counter-Top Mount</td>
<td>22.00</td>
</tr>
</tbody>
</table>

### C-Clamp Mount

This surface-saver permits Mic Arm anchoring to a table edge with the option for permanent or temporary mounting. Jaw capacity 2”. Weighs 1 lb.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>14005</td>
<td>C-Clamp Mount</td>
<td>25.00</td>
</tr>
</tbody>
</table>

### 3 Arm Riser/Mount

This triple-mount accessory is perfect in interview and roundtable situations. Plug in 3 arms for multiple guests. Screw-down base. Overall height 11 13/16”. Weighs 5 lbs.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>14111</td>
<td>3 Arm Riser/Mount</td>
<td>75.00</td>
</tr>
</tbody>
</table>

### Diagonal Extension Arm

Extend arms a full 12.5” laterally, point-to-point. Upward 15° angle. Weighs 2 lbs.

<table>
<thead>
<tr>
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<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>EB-1</td>
<td>Diagonal Extension Arm</td>
<td>75.00</td>
</tr>
</tbody>
</table>

### Riser

Allows you to pull studio equipment up close by placing the mic arm a full 12” above the mounting surface, before any positioning commences. Studio equipment may be up to 10.5” high. Screw-down base. Weighs 1 lb.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>14100</td>
<td>Riser</td>
<td>60.00</td>
</tr>
</tbody>
</table>

### Heavy Duty Springs

Helps to support vintage microphones such as the RCA 44BX and early BBC models on the Deluxe Series mic arms. Adding heavy-duty springs allows any of the Deluxe Series mic arms to support up to 8 lbs. Weighs 1 lb. Requires two.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
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<tbody>
<tr>
<td>12402</td>
<td>Heavy Duty Springs</td>
<td>3.00</td>
</tr>
<tr>
<td>12402-G</td>
<td>Same as above, gold color</td>
<td>12.00</td>
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</table>

### Regular Duty Springs


<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>12404</td>
<td>Regular Duty Springs</td>
<td>2.00</td>
</tr>
<tr>
<td>12404-G</td>
<td>Same as above, gold color</td>
<td>10.00</td>
</tr>
</tbody>
</table>

All O. C. White microphone stand products come with a standard 5/8” 27-thread mic connector and internal, through-the-arm wireways that allow cables to be kept hidden.

Available in either black or beige. Gray and other colors are available upon request.
Rycote’s industry-standard windshield system components are available in multiple sizes to accommodate most of the mono and single-point stereo microphones of leading manufacturers. Each system consists of a Windshield mounted to a Modular (shockmount) Suspension, with the option of adding a Windjammer or a Hi-Wind Cover for additional wind protection.

**Modular Suspensions**
- Lightweight 4-point suspension with a high precision modular frame
- Available in 3 sizes to accommodate a wide range of microphones
- Includes both pistol grip and boom adapter as well as a range of clips and O-rings ensuring a custom fit

**Windshields**
- Up to 25dB exterior wind attenuation without unnecessary high frequency roll-off – an 8 to 10 dB improvement over foam windscreens
- Lightweight and durable - gray plastic netting tube with a specially attached screening material
- Twist and turn locking end caps are rattle free and secure
- Unique slide-on / slide-off system for easy removal of mic and suspension

**Windjammers**
- Provides an extra 8 - 10 dB of protection over a standard windshield
- Specially designed materials with virtually no adverse effects on sound level or quality
- Available in sizes to fit all windshields

**Hi-Wind Covers**
- The Hi-Wind cover is a soft, dark gray, custom fitted stretch fleece fabric cover that fits snugly over the Windshield providing an extra 3 - 5 dB of attenuation during windy conditions

---

<table>
<thead>
<tr>
<th>Microphone</th>
<th>Windshield, Windjammer and Hi-Wind Cover Order Codes (A-Z)</th>
<th>Modular Suspension Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>CK8 451 / 460</td>
<td>P</td>
<td>M2</td>
</tr>
<tr>
<td>C568EB</td>
<td>I</td>
<td>M2</td>
</tr>
<tr>
<td>CK98 SE300B</td>
<td>P</td>
<td>M2</td>
</tr>
<tr>
<td>CK1, 61, 63 451 / 460</td>
<td>C</td>
<td>M1</td>
</tr>
<tr>
<td>CK9L, 92, 93 SE300B</td>
<td>C</td>
<td>M1</td>
</tr>
<tr>
<td>CK68, 69 460 / 480 (Short)</td>
<td>N</td>
<td>M2</td>
</tr>
<tr>
<td>CK68, 69 460 / 480 (Long)</td>
<td>U</td>
<td>M2</td>
</tr>
</tbody>
</table>

**Audio Technica**
- AT 4071a | Q | M2 |
- AT 4073a | I | M2 |
- AT 822 | F | M1 |
- AT 825 / AT 835ST | H | M1 |
- AT 815 | W | M3 |
- AT 835 / AT 815ST | Q | M2 |

**Beyerdynamic**
- 716 / 726 / 736 / 836 | L | M2 |
- MCE86 / MCE87 | M | M2 |
- M 160 | B | M1 |
- M 88 | F | M1 |
- 717 / 727 / 737 / 837 | Y | M3 |

**Neumann**
- KM 84 / 184 | B | M1 |
- KM 100 Series | A | M1 |
- KM 100F | C | M1 |
- KM R 81 | I | M1 |
- KM R 82 | S | M2 |
- RSM 191 | Y | M1 |

**Schoeps**
- CMC Series | B | M1 |
- CMC Series CUT 1 | E | M1 |

**Sennheiser**
- M KH 20, 40, 50 | D | M1 |
- M KH 30 | E | M1 |
- M KH 60 | K | M2 |
- M KH 70 | R | M2 |
- M KH 816 | X | M3 |
- ME64-K6 / ME44P | F | M1 |
- ME66-K6 / K3U-M E80 | O | M2 |
- ME67-K6 | U | M2 |
- M KH 416 | I | M2 |

**Shure**
- SM 81 | D | M1 |
- SM 89 | X | M3 |

**Sony**
- C74 | T | M3 |
- C76 | Z | M3 |
- ECM 670 | I | M2 |
- ECM 672 | L | M2 |
- ECM M 55 | E | M1 |
RYCOTE

BALL GAGS & STEREO WINDSHIELDS

Rycote has been manufacturing windshield systems for more than thirty years, and, over that period, has built a reputation of being the industry standard. They were honored with an Academy Award for the design and development of their modular system. Rycote designs, develops and manufactures all of their own products, and continues to provide the industry with the most effective microphone windshield and shockmount systems available.

Extended Ball Gags

Extended Ball Gags are windshield systems for remote capsule use of AKG Blue Line, Neumann KM 100 Series and Schoeps CMC and CCM microphones. Available with a 100mm diameter for single capsules and a 140mm diameter for Stereo M/S. Extended Ball Gag Suspensions come standard with a boom adapter.

100mm Mono Extended Ball Gag Components

- Mono Extended Ball Gag
- Mono Extended Ball Gag Suspension
- Mono Extended Ball Gag Suspension M/S Configuration
- Mono Extended Ball Gag Hi-Wind Cover
- Mono Extended Ball Gag Windjammer

140mm Stereo Extended Ball Gag Components

- Stereo Extended Ball Gag
- Stereo Extended Ball Gag Suspension M/S Configuration
- Stereo Extended Ball Gag Hi-Wind Cover
- Stereo Extended Ball Gag Windjammer

Baby Ball Gagg windshields offer the wind attenuation properties of a full size windshield but in a much smaller size. Available in three sizes - 20mm for Schoeps CMC Series, 22mm for Neumann KM 100 series and 25mm for Sennheiser MKH 20, MKH 40 and MKH 50. Baby Ball Gag Windjammers are available to provide additional wind protection.

140mm Stereo Windshields are available for a wide range of single point source stereo microphones and M/S stereo arrays. Please specify the make and model you wish to house and we will do the rest.

140mm Stereo Windshield .......... CALL
Stereo Modular Suspension ................. CALL
Stereo Hi-Wind Cover ..................... CALL
Stereo Windjammer .................... CALL

Connbox

The Connbox is fitted to the Modular Suspension to isolate the mic from cable-borne noise. The mic tail uses an anti-rattle XLR at the mic and a snap-fit Binder at the Connbox. The output lead is a three pin or five pin XLR.

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Description</th>
<th>Microphone</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB1</td>
<td>Mono Connbox, Standard</td>
<td>Up to a short shotgun length</td>
</tr>
<tr>
<td>CB2</td>
<td>Mono Connbox, Long</td>
<td>Long shotgun</td>
</tr>
<tr>
<td>CB3</td>
<td>Stereo Connbox</td>
<td>Two mics in an M/S array</td>
</tr>
<tr>
<td>CB4</td>
<td>Stereo Connbox, Five Pin</td>
<td>Single shank stereo mic</td>
</tr>
<tr>
<td>CB4 Ext.</td>
<td>Stereo Connbox, Five Pin</td>
<td>Shure VP88</td>
</tr>
<tr>
<td>CB5</td>
<td>Mono Lemo ConnBox</td>
<td>(1) Schoeps CCM Mic</td>
</tr>
<tr>
<td>CB6</td>
<td>Stereo Lemo Connbox - M (2)</td>
<td>Schoeps CCM’s in 100mm Ball Gag</td>
</tr>
<tr>
<td>CB7</td>
<td>Stereo Lemo Connbox - S</td>
<td>(2) Schoeps CCM’s in 140mm Ball Gag</td>
</tr>
</tbody>
</table>
The Rycote Softie is a 70mm slip-on cover with an integral synthetic fur exterior designed to provide a flexible and extremely effective solution for location audio on the go. Softies are available in a number of sizes and configurations and can be purchased with a shockmount and choice of pistol grip/stand mount or boom adapter. The Softie windshield by itself, provides a fast and cost effective solution for camera-mounted ENG mics.

- The (70mm diameter) Softie windshield is constructed of an acoustic foam base covered by a specially designed synthetic fur fabric
- Available with or without a separate shockmount with its own bracket that includes a choice of a pistol grip handle or boom adapter
- The combined Softie windshield and shockmount provides wind attenuation comparable to a standard Rycote windshield
- The Softie windshield alone provides a fast, flexible and cost effective solution for camera-mounted ENG microphones
- Available in a range of sizes to fit most popular microphones from 5cm to 32cm and a choice of three hole diameters:
  - Small (SH) for 19/20mm mics
  - Medium (MH) for 21/22mm mics
  - Large (LH) for 24/25mm mics

<table>
<thead>
<tr>
<th>Softie with Mount*</th>
<th>Fits</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>5cm SH Softie</td>
<td>Sennheiser 405, 406, M E20, M E40, Schoeps CMC Series, AKG CK71, CK92, CK93 and SE300B</td>
<td>275.00</td>
</tr>
<tr>
<td>5cm MH Softie</td>
<td>AKG CK1, CK63, 460, Azden 5G-1X (omni), Neumann KM100, KM 184, Sennheiser M E62 and 64</td>
<td>275.00</td>
</tr>
<tr>
<td>5cm LH Softie</td>
<td>Sennheiser M KH20, 40 and 60</td>
<td>275.00</td>
</tr>
<tr>
<td>12cm MH Softie</td>
<td>Audio-Technica AT 877, 4073a</td>
<td>285.00</td>
</tr>
<tr>
<td>18cm SH Softie</td>
<td>Beyer 716, 726, Sennheiser M KH 416, Sanken CS 3</td>
<td>285.00</td>
</tr>
<tr>
<td>18cm MH Softie</td>
<td>ACG C566EB, CK88, 69 Short, Beyer 836, Neumann KM R 81, Sennheiser ME66K6, ME80, ME80, Sennheiser M 60, and Sony ECM 670</td>
<td>285.00</td>
</tr>
<tr>
<td>18cm LH Softie</td>
<td>Beyer M CE86, M CE87, Sennheiser M KH 60, Sony ECM 672</td>
<td>285.00</td>
</tr>
<tr>
<td>24cm SH Softie</td>
<td>AKG CK98 SE300B</td>
<td>295.00</td>
</tr>
<tr>
<td>24cm MH Softie</td>
<td>Audio-Technica AT 835b</td>
<td>295.00</td>
</tr>
<tr>
<td>29cm MH Softie</td>
<td>Audio-Technica AT 4071a, AT 815ST, Neumann KM R 82, and the Sennheiser ME67K6</td>
<td>295.00</td>
</tr>
<tr>
<td>29cm LH Softie</td>
<td>Sennheiser M KH 70</td>
<td>295.00</td>
</tr>
<tr>
<td>32cm MH Softie</td>
<td>AKG CK69 Long, Audio-Technica AT 815b</td>
<td>295.00</td>
</tr>
</tbody>
</table>

*Softie also available without mount

Camera Mounted Softies
Provides a fast, flexible and cost-effective solution for ENG on-camera mics.

<table>
<thead>
<tr>
<th>Camera Mounted Softie Models</th>
<th>Fits the:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10cm LH Softie Front</td>
<td>Sony DVW 600, 700, DNW 7, DVW 790, DNW-9WSP, DNW 90 and Canon XL-1</td>
</tr>
<tr>
<td>12cm SH Softie Front</td>
<td>Ikegami HL45, HLV55/M C10, HLV59 and Sony UV W 100, BV5550</td>
</tr>
<tr>
<td>12cm MH Softie Front</td>
<td>Audio-Technica AT 877, AT 4073a, Azden 660, Ikegami M C230, HLV 79, DVW/M C11, Panasonic AJ/D 610, 700, 800, Sony DSR-130WSP, DSR 300, 500, BV 570, BV 950, DVC-D 30P, PD-150</td>
</tr>
<tr>
<td>12cm LH Softie Front</td>
<td>Sony BVW, BVPS/BVP 7, HD700, DVW700A</td>
</tr>
<tr>
<td>14cm MH Softie Front</td>
<td>AT 835ST, Sony DDC 637, and DSR-PD58</td>
</tr>
</tbody>
</table>

Short Hair Softies
- Available for the same range of microphones as the standard Camera Mounted Softies
- Constructed of the same acoustic, reticulated foam and snug fitting end cap as the Softies
- Designed to avoid casting unnecessary shadows when working in camera mounted conditions
- Closely cropped dark gray synthetic fur, just 10mm high, offers a lower profile and a more compact design without severely altering the efficiency of the Softie
Utility Mount

A universal shockmount that accepts microphones from 6” in length and up to 1.5” in diameter. Rugged, lightweight aluminum extrusion with two universal bands. Use alone for interiors or slide it into a Windshield for outdoor use. Includes Pistol Grip.

Multi Mount

A modified Softie Mount with a female 3/8” threaded brass insert suitable for stand and pole mounting. An integral accessory shoe allows for camera hot-shoe mounting.

Mini Windjammers

Mini Windjammers are designed to improve the performance of consumer camcorders with on board microphones and are to be positioned over a foam windscreen.

- REPLACEMENT ITEMS -

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono Windshield End Cap</td>
<td>$40</td>
</tr>
<tr>
<td>Stereo Windshield End Cap</td>
<td>$45</td>
</tr>
<tr>
<td>Microphone Tail</td>
<td>$65</td>
</tr>
</tbody>
</table>

Softie Mount Accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softie Mount</td>
<td>Boom Adapter or Pistol Grip (Specify SH, M H, LH)</td>
<td>$150</td>
</tr>
<tr>
<td>Pistol Grip Handle</td>
<td>For Softie Mount</td>
<td>$45</td>
</tr>
<tr>
<td>Boom Adapter</td>
<td>For Softie Mount</td>
<td>$45</td>
</tr>
<tr>
<td>Rubber</td>
<td>for Softie Mount (Specify SH, M H, LH)</td>
<td>$48</td>
</tr>
</tbody>
</table>

Special 130
Up to 2.0” diameter by 5.0” length including the Sony PD-150

Special 155
Up to 2.0” diameter by 6.25” length including the Cannon XL1

Special 190
Up to 2.0” diameter by 7.50” length including the Sennheiser MKE300

Special 190
Up to 2.0” diameter by 7.50” length including the Sennheiser MKE300

Shure VP88
For use on Shure VP88 over the foam windscreen

Lavalier Windjammer

The Furry is designed to be used on lavaliers worn on the outside of clothing. To ensure a proper fit, it includes an internal removable foam insert that holds many popular sized lavs and provides the air space required to make the Windjammer effective. (Sold in pairs)

ORDER & INFO. (212) 444-5088 • FAX: (212) 239-7770 (800) 947-7008
1-800-875-6951 • www.bhphotovideo.com
CARBON FIBER BOOM POLES

VDB has been the foremost manufacturer of carbon fiber boom poles for more than a decade. Building upon the worldwide experience gained during this time, VDB set out to design the world’s finest boom pole. The results speak for themselves.

VDB offers these boom poles with their unique “quick” locking collars or with “classical” one-way locking collars. The choice is yours. Both styles of locking mechanisms feature VDBs creak-proof designs, making VDB the pole to own.

- The foremost manufacturer of carbon fiber boom poles for more than a decade
- Individually designed and filament wound carbon fiber tubes
- Able to pass a full size XLR connector through the pole without tools or unsoldering
- Precision machined double concentric locking collars
- Unique six section design for reduced collapsed length
- A special coating of the primary tube reduces handling noise
- Available without cable, straight cabled, or with an internal coil cable

<table>
<thead>
<tr>
<th>Model</th>
<th>Length Closed</th>
<th>Length Open</th>
<th># of Elements</th>
<th>Weight</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baby</td>
<td>16˝</td>
<td>5’ 4”</td>
<td>6</td>
<td>9 oz.</td>
<td>Call</td>
</tr>
<tr>
<td>Small</td>
<td>20˝</td>
<td>7’ 3”</td>
<td>6</td>
<td>10 oz.</td>
<td>Call</td>
</tr>
<tr>
<td>Medium</td>
<td>24˝</td>
<td>9’</td>
<td>6</td>
<td>13 oz.</td>
<td>Call</td>
</tr>
<tr>
<td>Large</td>
<td>31˝</td>
<td>12’ 10”</td>
<td>6</td>
<td>16 oz.</td>
<td>Call</td>
</tr>
<tr>
<td>X-Large</td>
<td>44˝</td>
<td>18’ 4”</td>
<td>6</td>
<td>20 oz.</td>
<td>Call</td>
</tr>
</tbody>
</table>

GT-10 Boom Pole

5-Section High Grade Aluminum Boom Pole
Designed for Broadcast and ENG

The GT-10 is a strong 5-section aluminum boom pole designed for broadcast and all other users. The pole is robust enough for the ENG market and priced to be attractive to all users. The GT-10 provides the quality of a far more expensive pole.

- Substantial easy to grip locking mechanism with a 1.5” long aluminum collar
- Minimum and Maximum Length: 30” - 9’ 8”
- Weighs only 30 oz
- Industry standard 3/8” threaded tip
- Powder coated soft-feel handle, and anodized tubing
- Poles can be supplied with or without cables – poles without still have the base attachment fitted to allow users to add their own cable without having to remove the connectors on the cable. The coil cable is high quality, with two conductors (26 GA - 19 strand tinned copper) with matte black urethane insulation and is terminated by Neutrik gold pinned connectors

GT10 without mic cable.......................155.00  GT10C with coiled mic cable............245.00

LIGHTWAVE AUDIO SYSTEMS

Large, strong aluminum collars allow easy tightening and loosening of pole section
Microphone Fishpoles

Three carbon fiber and four aluminum microphone poles available in various lengths, designed for the location sound and broadcast audio recordist. The carbon poles use ultra lightweight, high modulus carbon fiber tubing that is very thin-walled without compromising their load capacity. The aluminum poles are made from stress-proof, high tempered aluminum alloys with black anodized finish. Telescopic extensions lock into place with a convenient twist-lock system, allowing simple and efficient setting of the required boom length. Complete with unique 1/4˝ - 3/8˝ reversible mounting screw, port hole for microphone cabling at both ends and soft rubber hand grip. Gitzo’s commitment to fine European craftsmanship ensures smooth gliding movement with minimum bow when poles are fully extended.

### Carbon Fiber

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Sections</th>
<th>Min Length</th>
<th>Max Length</th>
<th>Weight</th>
<th>Capacity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1551 Carbon Mic Boom 142</td>
<td>5</td>
<td>17.75˝</td>
<td>57˝</td>
<td>1 lb</td>
<td>5 lbs.</td>
<td>176.95</td>
</tr>
<tr>
<td>G1552 Carbon Mic Boom 243</td>
<td>5</td>
<td>25½˝</td>
<td>79˝</td>
<td>1.25 lbs.</td>
<td>5 lbs.</td>
<td>194.95</td>
</tr>
<tr>
<td>G1553 Carbon Mic Boom 344</td>
<td>5</td>
<td>33.5˝</td>
<td>135½˝</td>
<td>1.6 lbs.</td>
<td>5 lbs.</td>
<td>249.95</td>
</tr>
<tr>
<td>G555 Loisir Fisher</td>
<td>2</td>
<td>31.25˝</td>
<td>55˝</td>
<td>.75 lbs.</td>
<td>5 lbs.</td>
<td>76.95</td>
</tr>
<tr>
<td>G556 Weekend Fisher</td>
<td>3</td>
<td>30.75˝</td>
<td>79˝</td>
<td>1 lb</td>
<td>1.0</td>
<td>84.95</td>
</tr>
<tr>
<td>G557 Sport Fisher</td>
<td>4</td>
<td>30.75˝</td>
<td>103.75˝</td>
<td>1.5 lbs.</td>
<td>1.5</td>
<td>108.95</td>
</tr>
<tr>
<td>G7680 Studex Fishpole</td>
<td>6</td>
<td>31˝</td>
<td>150˝</td>
<td>2.25 lbs.</td>
<td>5 lbs.</td>
<td>169.50</td>
</tr>
</tbody>
</table>

### Aluminum

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Length</th>
<th>Weight</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP 90A 613 (LTM P2063)</td>
<td>20˝ - 63˝</td>
<td>9.5 oz.</td>
<td>348.95</td>
</tr>
<tr>
<td>MP 90A 614 (LTM P319)</td>
<td>31˝ - 9˝</td>
<td>13.7 oz.</td>
<td>369.95</td>
</tr>
<tr>
<td>MP 90A 615 (LTM P413)</td>
<td>49˝ - 13˝ 8˝</td>
<td>17.6 oz.</td>
<td>469.95</td>
</tr>
<tr>
<td>MP 90A 616 (LTM P516)</td>
<td>62˝ - 16˝ 7˝</td>
<td>23 oz.</td>
<td>479.95</td>
</tr>
</tbody>
</table>

### LTM - Mic Poles and Accessories

- Scratch-resistant black finish
- Robust and super lightweight
- Minimum bow when fully extended
- Available in four sizes from 20˝ to 16´ 7˝
- Size, weight and balance for the most comfortable feel

**Shock Mount (LT SM)** .............................................77.95
**Microphone Suspension (LTM S)** .....................................79.95
**Windscreen (LTWS)** ..............................................513.50
**Windscreen Muff (LTWSM)** .......................................217.50

The BoomMate and Boompole Holder allow you to mount a boom/fish pole onto a standard mic stand, C stand or any stand with a 5/8˝ thread. Ideal for hands-free control of your boom pole in the field or in the studio. The longer and more rugged BoomMate is well suited for longer boom poles where greater balance and control is required. Both the Boompole and BoomMate require the Matthews or Avenger Grip Head for mounting. Available in black.
For the past 25 years WindTech has manufactured high quality microphone windscreens for the broadcast, live sound and studio markets. Available in as many as 25 brilliant colors, in a wide variety of sizes and shapes to fit most popular microphones.

- Constructed from a specially developed hypo-allergenic, open-cell acoustical foam called SonicFoam using a proprietary non-heat manufacturing process.
- The acoustically transparent SonicFoam reduces wind noise, plosives and breath noise while at the same time permits unobstructed passage of sound without altering the mic’s frequency response.
- Adding a windscreen will also protect your microphone from dust, dampness and physical damage.

### Shotgun Windscreens

<table>
<thead>
<tr>
<th>Model</th>
<th>SG-200</th>
<th>SG-60</th>
<th>SG-70</th>
<th>SG-1</th>
<th>SG-2</th>
<th>SG-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside Diameter</td>
<td>.9867˝</td>
<td>.9375˝</td>
<td>.9375˝</td>
<td>.7500˝</td>
<td>.7500˝</td>
<td>.7500˝</td>
</tr>
<tr>
<td>Inside Depth</td>
<td>4.75˝</td>
<td>6.00˝</td>
<td>11.25˝</td>
<td>7.250˝</td>
<td>11.50˝</td>
<td>20.00˝</td>
</tr>
<tr>
<td>Overall Length</td>
<td>5.25˝</td>
<td>7.00˝</td>
<td>12.25˝</td>
<td>8.375˝</td>
<td>12.50˝</td>
<td>21.00˝</td>
</tr>
<tr>
<td>Overall Diameter</td>
<td>1.718˝</td>
<td>2.375˝</td>
<td>2.375˝</td>
<td>2.125˝</td>
<td>2.125˝</td>
<td>2.125˝</td>
</tr>
<tr>
<td>Price</td>
<td>14.95</td>
<td>19.95</td>
<td>24.95</td>
<td>19.95</td>
<td>24.95</td>
<td>29.95</td>
</tr>
</tbody>
</table>

- Prevents unwanted wind, breath and pop noises.
- Made from acoustical hypo-allergenic SonicFoam.
- Washable long lasting and keeps original shape.
- Protects you microphone from dirt moisture and impact damage.

### Ultra Series Windscreens

Fits most ‘straight’ or small ball end mics.

- **US-1**: Up to 1/4" shaft diameter ........................................ 29.95
- **US-2**: Up to 7/8" shaft diameter ....................................... 29.95
- **US-3**: Up to 3/4" shaft diameter ....................................... 29.95

### 20 / 421 Series Windscreen

Fits most large diaphragm microphones with an outside diameter up to 2.125" ........................................ 29.95

### CT30 Series Foam Pop Filter

Allows you to use an affixed foam “Pop” filter over large studio style mics. Helps reduce diaphragm moisture as well as P-Pop sounds. Fits most large diaphragm mics with an outside diameter up to 2.5" ........................................ 29.95

### CT80 Series Windscreens

Fits most large diaphragm microphones with an outside diameter up to 2.5" ........................................ 29.95

### EXTRA LARGE WINDSCREENS

<table>
<thead>
<tr>
<th>Model</th>
<th>Inside Diameter</th>
<th>Inside Depth</th>
<th>Total Length</th>
<th>Overall Diameter</th>
<th>Colors Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/421 Series</td>
<td>1.875˝</td>
<td>3.250˝</td>
<td>4.375˝</td>
<td>3.375˝</td>
<td>1 - 19</td>
</tr>
<tr>
<td>CT-30 Series</td>
<td>2.375˝</td>
<td>3.500˝</td>
<td>4.375˝</td>
<td>3.500˝</td>
<td>Black</td>
</tr>
<tr>
<td>CT-80 Series</td>
<td>2.375˝</td>
<td>3.500˝</td>
<td>4.375˝</td>
<td>3.500˝</td>
<td>Black</td>
</tr>
<tr>
<td>Ultra Series US-1</td>
<td>1.750˝</td>
<td>4.375˝</td>
<td>3.375˝</td>
<td>3.375˝</td>
<td>Black</td>
</tr>
<tr>
<td>Ultra Series US-2</td>
<td>.75˝</td>
<td>1.750˝</td>
<td>4.375˝</td>
<td>3.375˝</td>
<td>Black</td>
</tr>
<tr>
<td>Ultra Series US-3</td>
<td>.625˝</td>
<td>1.750˝</td>
<td>4.375˝</td>
<td>3.375˝</td>
<td>Black</td>
</tr>
</tbody>
</table>
Rapido - Mic Stand Quick Release

A real world, and truly affordable solution to the age old problem of changing microphones from stand to stand.

- Allows you to quickly and easily install and remove mics and clips from a mic stand with a simple twist of the wrist
- Speed up and simplify the set-up and tear down between and during recording sessions and live gigs
- Eliminates maintenance issues caused by constant mounting and unmounting of mics and clips from stands – no more broken mic clips or stripped threading

- Only 1.52" tall and weighs less than 0.5 oz.
- High quality aluminum with a durable anodized black or silver finish
- Standard 5/8" - 27 thread
- Tops and bottoms can also be purchased separately, which allows you to install Rapido cost-effectively for all of your mic clips and mic stands – ideal if you often exchange mics with stands

**SHOCK-PROOF MICROPHONE HOLDERS**

- Vibration free microphone shockmount for virtually any application
- Reduces low frequency rumble, stage vibrations and handling noise
- Heavy rubber isolation ring 3/4” x 1 1/2”
- Snug fit with 35 lbs. of mic holding pressure
- Threaded brass insert with U.S. standard 5/8”-27 thread

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP-20</td>
<td>for mics 3/4” and larger (smaller condenser type)</td>
<td>9.95</td>
</tr>
<tr>
<td>SP-25</td>
<td>for mics 1” and larger (standard hand-held size)</td>
<td>9.95</td>
</tr>
<tr>
<td>SP-30</td>
<td>for mics 1 1/8” and larger (larger body wireless)</td>
<td>9.95</td>
</tr>
</tbody>
</table>

**MICROPHONE CLIPS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-4</td>
<td>Extra-large, heavy duty clip for wireless microphones up to 1.75” diameter</td>
<td>5.95</td>
</tr>
<tr>
<td>MC-6</td>
<td>An industry standard slip-in microphone clip. Fits almost all microphones</td>
<td>3.95</td>
</tr>
<tr>
<td>SMC-7</td>
<td>Spring clamp type mic clip. Holds virtually any regular or wireless mic</td>
<td>4.50</td>
</tr>
<tr>
<td>MC-9</td>
<td>High quality mic clip – uses virtually unbreakable ABS plastic</td>
<td>4.95</td>
</tr>
<tr>
<td>MC-11</td>
<td>The same ABS material as MC-9 but for smaller mics from .80” to 1” diameter</td>
<td>4.95</td>
</tr>
</tbody>
</table>

**CLAMPS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA-358</td>
<td>Adapts to any microphone stand to hold up to 3 separate microphones. Female brass insert with 5/8” - 27 thread and male 5/8” - 27 thread</td>
<td>11.95</td>
</tr>
<tr>
<td>MPC-10</td>
<td>“C” type, multi-position clamp, fits 1.25” diameter tube or flat surface. Male 5/8” - 27 thread. The tread rotates 90° in three positions. Soft rubber insert prevents scratching</td>
<td>13.95</td>
</tr>
<tr>
<td>MSA-1</td>
<td>Add-on clamp for a second mic on the same stand. Clamps on to any standard microphone or drum stand. Male 5/8” - 27 thread. New nylon tip</td>
<td>10.95</td>
</tr>
</tbody>
</table>
ST 2
Double Mic Support

- Two suspension rings allow you to isolate the mic from the mic stand thereby minimizing noise transmitted from the mic stand to the mic up to 15dB
- The distance between the two suspension rings can be adjusted along a 10 cm long hexagonal rod to accommodate microphones of various lengths
- Suitable for any tubular or conical mic shape up to 2” diameter

SPK
Protector Kit

- SPK is a set of tools consisting of: 1 ST2, 1 SSM-1 and 1 SPF, mounted together
- When combined with two SSM-1’s, as in the SPK kit, the ST2, permits the versatile use of simultaneously forming, for example, a ZEPPELIN support or X/Y for stereo and over all configuration

SMS-5.1
Surround Capturing Mount

- The SM 5.1 is a revolutionary conception of natural 5.1 surround capturing
- Allows simultaneous mounting of five microphones with independent positioning over a full 360 degrees spectrum and full angular adjustment
- It consists of five hexagonal 20 cm. long arms attached to a disc that allows radial adjustments
- A SSM-1 is mounted on each of the five arms each of which can be vertically adjusted, allowing the placement of any mic

ST 4
Multiple Mic Support

- Same as above with four mic mounting towers that can be adjusted along a 30 cm. long hexagonal, anodized black, aluminum bar
- Ideal for podium mounting – allows you to mount up to four mics on one stand, ensuring the view in front of the speaker is clean and organized

SSM-1
Universal Shockmount

- Two suspension rings allow you to isolate the mic from the mic stand thereby minimizing noise transmitted from the mic stand to the mic up to 15dB
- The distance between the two suspension rings can be adjusted along a 10 cm long hexagonal rod to accommodate microphones of various lengths
- Suitable for any tubular or conical mic shape up to 2” diameter

SPF
Pop Filter

- Attenuates sibilance and plosives using two parallel ortophonic rings, mounted onto a brace and fixed on an articulated arm
- Screens are easily replaceable with model PF A pair of spare screens for the SPF

ST2 shown in different configurations

ST2
Double Mic Support

$29.95

ST2 shown

ST2 shown

ST2 shown

ST2 shown

ST2 shown

ST2 shown

ST2 shown

ST2 shown
WindBoss Windscreens

The WindBoss series offers a simple and flexible way to improve wind rumble rejection for your condenser mics. They provide the benefits of traditional, hard-shelled windshields without the associated expense and single application restrictions. The universal microphone mounting suspensions allow the WindBoss to be used with virtually any condenser mic. It uses simple silicone rubber o-rings to provide an excellent shockmount. These bands are unaffected by changes in temperature and humidity and they offer an easy and quick way of changing mics without the parts breakage associated with traditional mounts. The design of the WindBoss outer foam “shell” is made of three pieces: a center section and two end caps. These two end caps are easily removed and replaced. The center section and its associated framework are available in three sizes providing wind protection for a multitude of microphones.

Small WindBoss
13 x 4˝ (LxD), weighs 6.4 oz ............ 294.95

Medium WindBoss
16 x 4˝ (LxD), weighs 7.8 oz ............ 309.95

MICROPHONE FLAGS

These blank microphone flags accept your graphics. They feature high-impact news grade construction and high density foam inserts.

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CLAMP ON Rubber-Neck

The Rubber-Neck series is a flexible extension that brings microphones closer to their subject and enables hands-free miking. These unique smooth black goosenecks boast of a no-crease technology and super stable positioning.

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Dual XLR Adapter for DV Camcorders

The DXA-4 offers an easy, reliable way to hook up professional audio gear to your DV camcorder — and with it, all the benefits of using balanced audio for superb sound every time. Record from two sources at the same time. Each input is recorded on a separate audio track, making it possible for you to mix both channels during editing. You can even feed a time code signal into one input and audio into the other.

- Two channels let you record two sources on separate tracks for post audio mixing. Both channels have their own mic/line level switch and trim potentiometers for flexibility and complete control.
- Securely mounts to underside of camcorder, eliminating cable strain.
- Also has a threaded hole for mounting on a tripod plate.
- Rugged all metal case is built to last and provides complete shielding from noise. Made with Neutrik XLR connectors and transformers for dependability you can count on.

DXA-4 (for VX-2000) ........ 169.95
DXA-4S (for TRV-Series) .. 169.95
DXA-4C (for XL-1) .......... 169.95
DXA-4P (for AG-DVC10) . 169.95

DXA-6 Audio Adapter with Phantom Power

All the great features of the DXA-4 adapters with the addition of 48 volt phantom power.

- Two balanced XLR mic/line switchable inputs for stereo recording with independent drift free trim controls that ensure reliable operation.
- Switchable dual 48 Volt Phantom Power.
- An auxiliary unbalanced 1/8” mini jack input is available on the right channel to accommodate wireless mics.
- MONO/STEREO switch allows recording both inputs to a single channel.
- Low Noise Transformers for Superb Sound.
- Runs on one standard 9 Volt alkaline battery.
- LED Battery Power Indicator.
- Stereo right angle unbalanced 1/8” mini-plug output connector attached to a 10” cable.
- Housed in a rugged aluminum case with a flat black finish.
- Measures 5.75 x 3.25 x 1.25” and weighs 12 oz.

SVU-2 Stereo VU Meter for Camcorders

- Multi-purpose stereo VU meter for camcorders and other recording devices.
- Bright ten-segment display to easily see under virtually any lighting condition.
- Calibrated display eliminates guesswork to set ideal recording levels.
- Built-in high powered headphone amplifier with volume control.
- Mounts to camera tripod socket or can be carried via belt clip.
- Operates on one standard 9 volt battery.
- LED battery power indicator.

$249.95
$134.95
Passive Dual XLR Adapter / Mini Mixer

The XLR-Pro is a Dual XLR adapter that lets you feed professional audio to any camcorder, DAT or MiniDisc recorder that provides an audio 1/8˝ input jack. This allows you to use professional mics, tap into PA systems and mixers, and use long run, balanced audio cables – all with complete confidence. Special circuitry ensures that the XLR-Pro will work with any camera.

**CONVERT YOUR CAMCORDER OR PROSUMER DIGITAL AUDIO RECORDER TO ACCEPT PROFESSIONAL XLR MICS**

- Each of the two inputs input offers a choice of XLR and 1/8˝ mic/line switchable inputs with volume controls – Hook up two XLR mics, or an xlr mic plus wireless mic, or any other combination of pro and prosumer mics
- Connects to your camera/recorder via an 1/8˝ stereo mini plug with a 13˝ cable
- A stereo/mono output switch allows you to record from one mic to both channels
- Securely mounts under your camera, for either hand held or tripod operation, or can be easily clipped onto your belt
- Enclosed in a black solid aluminum housing that protects the entire electrical circuit from soundtrack destroying interference
- High performance multi-shielded transformers ensure extremely quiet operation
- State-of-the-art latching Neutrik XLR connectors
- A unique ground switch (not to be confused with a “ground lift” switch) lets you select the quietest ground for any camera
- Voltage blocking circuit permits operation when connecting to plug-in power mic jacks found on some camcorders (Sony VX1000, VX2000, VX700, TRV900 & others)
- 20 - 20k Hz frequency response (±1dB max)
- Measures 5.25 x 2.75 x 1.25˝ and weighs only 13.5 oz.

**VU150 Audio Level Meter**

The VU150 audio meter helps you maintain proper audio levels being recorded to your video camcorder.

- 1.5˝ wide, 10-segment left and right LED meters measure audio levels between -20dB to +3dB
- The large display is switchable between two modes:
  - **Bar mode** displays intensity by a continuous line of LEDs
  - **Dot mode** displays intensity using a single LED at the given intensity level. Dot mode requires less power than bar mode enabling longer battery life
- Works on any camera with a standard 1/8˝ stereo headphone output
- Mounts easily and securely on your camera’s accessory shoe
- Adjustable brightness for full visibility in daylight or turn down to conserve battery indoors
- Left and Right audio calibration adjustments
- Built in headphone output with a volume control adjustable from -40dB to +20dB
- Runs continuously for approximately 100 hours using a 9V alkaline battery
- Low battery indicator
- Measures 3.5 x 2.5 x 1.5˝ and weighs 5.5oz. with battery
- 1-year warranty