

Microphones

HIGH-QUALITY, SOUND DESIGN



Innovative Solutions for Demanding Applications

Bogen's selection of high-quality, portable microphones offer clear, natural, intelligible sound. Engineered for accurate sound reproduction, each microphone is ruggedly constructed to withstand the demands of sound installations. A variety of types are available including gooseneck, desktop, handheld, overhead hanging, and surface-mount microphones. Both contemporary and traditional designs provide accurate response and dependable performance, with optimum clarity.

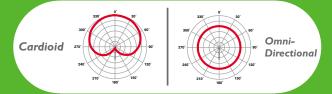
Bogen's microphone models are crafted with professional-grade features, including models with rubberized grips, dent-proof screens, and quiet on/off glide switches. In addition, Bogen's handheld mics feel good in the hand and reduce resonance from taps and handling.

A variety of accessories are available for Bogen's line of microphones - including stands, mounting clips, and cables.

Sensitivity Patterns

Microphones pick up sound differently, based on its type of sensitivity pattern. There are two main types: Cardioid and Omni-Directional.

Cardioid (Uni-Directional) - this pickup pattern is sensitive to sound coming from one direction - in front of the microphone - thus, it best serves a single user. It is preferred for applications where there is likelihood of feedback, where the ambient noise is too high or variable for a good clear signal, or where the user will be close to the microphone. Microphones with a cardioid pickup pattern greatly reduce the chance of reproducing unwanted sources of noise that are at the back or sides of the microphone, such as with an audience.



Omni-Directional - This microphone pickup pattern is sensitive to sound from all directions - in front, back, and on the sides of the microphone - thus, best serving a group of users. Omni-directional microphones are preferred for use in studios, offices, round-table discussions, or other environments where there is no ambient background noise (such as a conference room). Microphones with an omni-directional pickup pattern provide a smoother response than microphones with a cardioid pickup pattern.

Handhelds

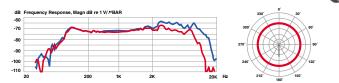
Handheld Public Address Microphone HDO100

Delivers smooth, professional sound. Provides a customtailored balanced response to complement any vocal style and timbre for singing, speech, or instrument sound reproduction. Uniform pickup of sound from all directions with no deterioration in frequency response. Clean clear reproduction with minimal ambient sound. Low sensitivity to handling noise and stage vibrations. Slim design provides optimum handling and control. Features an internal rubber shock isolation system, a rigid

low noise cable mount system, and a lockable silent on/off reed switch.

6-1/2" D x 1-1/2" dia., 1 lb.

- Durable all-metal zinc case with rubberized black finish
- Omni-directional pickup pattern
- Moving coil dynamic element
- 500-ohm impedance
- Frequency response range of 70Hz - 15kHz
- Sensitivity of -72dB +/- 3dB

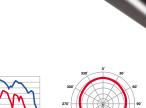


Professional Handheld Stage Microphone HDU250

Performs professionally in acoustically demanding environments. Capable of projecting vocals with remarkable clarity and power. Excellent gain before audio feedback, reduced pickup of unwanted signals, increased frontal sensitivity, low sensitivity to breath/pop noise, and high sound pressure capability without distortion. Features an efficient shock-mounted Neodymium capsule that prevents handling and transmission noise, a rigid lownoise cable-mount system, a multi-layer breath/wind filter, and a lockable silent on/off reed switch.

7" D x 1-1/4" dia., 1 lb.

- Durable all-metal zinc case with rubberized black finish
- Heavy, rugged reliable construction
- Cardioid pickup pattern
- Moving coil dynamic element
- 250-ohm low impedance
- Wide frequency response range of 50Hz - 18kHz
- Sensitivity of -72dB +/- 3dB





Professional Instrument Microphone HCU350

Brilliant accurate sound with minimum ambient noise. High signal-to-noise ratio for rich recorded sound. Suitable for reinforcement applications with strings, woodwinds, acoustic pianos, bass, and as an overhead microphone for drums and cymbals. Low self noise and wide dynamic range. Features internal shock-absorber system against handling transmission noise, and an integral multi-layer windscreen to prevent wind and pop noise on open-air stages.

6-1/4" D x 1" dia., 5 ounces.

- Rubberized black finish
- Mechanically sound, stable construction
- Cardioid pickup pattern
- Electret condenser element
- Phantom-power operated (9 52V DC)
- 60-ohm impedance
- Frequency response range of 30Hz 20kHz
- Sensitivity of -56dB +/- 3dB



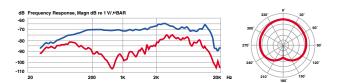
Handheld Stage Microphone HDU150

Provides crisp, clear sound in any environment. Wide frequency range ensures audio richness. Minimal audio feedback, excellent sound balance and tolerance, reduced pickup of unwanted signals, increased frontal sensitivity, and low sensitivity to breath/pop noise. Features a rubber shock-mount system for attenuation of handling and cable noises, a rigid low noise cable mount system, and a lockable silent on/off reed switch.

6-1/2" D x 1-1/2" dia., 1 lb.

- Heavy all-metal zinc case with rubberized black finish
- Durable ball-shaped construction
- Cardioid pickup pattern
- Dynamic element
- 500-ohm impedance
- Frequency response range of 70Hz - 15kHz
- Sensitivity of -70dB +/- 3dB



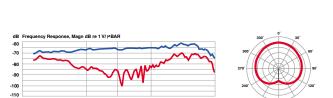


Specialty

Professional Boundary Microphone SCU250

Full, rich reproduction of voice and music in a low-profile design. Perfect for applications where minimum visibility is required, or where a handheld microphone might be impractical to use. Low sensitivity to thumping noise, excellent user sound isolation, feedback rejection, and reduced room reverberation. Excellent clarity for multiple microphone applications. Features compatible outputs for interfacing with auxiliary equipment. 2-3/4" W x 3-1/4" D x 3/4" H, 1 lb.

- Heavy-duty metal case with matte black finish
- · Cardioid pickup pattern
- Electret condenser element
- Phantom-powered (9 52V DC)
- 250-ohm impedance
- Frequency response range of 50Hz - 18kHz
- Sensitivity of -68dB +/- 3dB



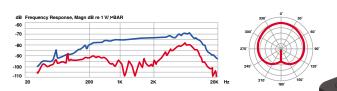
Desktops

Dynamic Desktop Microphone DDU250

High-quality slim, compact desktop microphone with gooseneck positioning flexibility for sound reinforcement applications. Exudes excellent speech and intelligibility. Cuts through noisy backgrounds of live miking situations and large gatherings. Effective control of feedback, reduced ambient handling noise, and low sensitivity to breath and popping sounds. Features a push-to-talk switch, a push-to-lock switch, a hard-wired 10-foot long, 5-conductor cable, and a wire-mesh wind filter. Table stand

with on/off switch. 4-1/4" W x 18-1/4" H x 6-1/4" D, 3-1/2 lbs.

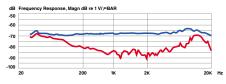
- 16" sturdy, flexible neck
- Rugged metal die cast base with shock mount
- Matte black finish
- · Cardioid pickup pattern
- External contact closure outputs
- Moving coil dynamic element
- 500-ohm impedance
- Wide frequency response range of 100Hz - 12kHz
- Sensitivity of -76dB +/- 3dB



Professional Overhead Hanging Microphone WCU250

High-quality sound reinforcement from a low-profile, compact, lightweight hanging microphone. Adjust metal hanger to angle in any direction. Ceiling-mount design allows for overhead pickup of groups. Accurate and dependable. Clear, crisp sound with full, rich reproduction of voice and music. Excellent off-axis rejection, no peaks, reduced handling noise sensitivity, high SPL handling capacity, and superior feedback control with no acoustic or electrical phase anomalies or audio band resonance. Low mass diaphragm. Features a high-tensile cable with mini XLR output plug. 1/2" W x 1-1/4" D, 5 ounces.

- · Stainless steel, adjustable black hanger
- 26-foot long cable
- · Matte black finish
- · Cardioid pickup pattern
- Electret condenser element
- Phantom-power operated (9 52V DC)
- 250-ohm impedance
- Wide frequency response range of 50Hz 18kHz
- Sensitivity of -65dB +/- 3dB



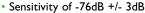


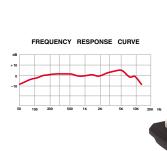
Desktop Paging Microphone MBS1000

This traditionally-styled, dual-impedance desktop microphone provides natural, highly intelligible sound that is smooth and peak free. Professional DPDT long-life leaf switches are operated with a simple push-to-talk bar (lockable) or lift-to-talk operation (defeatable) for microphone and relay switching. Features 7 feet of heavy-duty four-conductor, 2-shielded cable; an impedance selector switch; and four molded non-skid, non-marring "feet". Voltage output is -76dB at Lo-Z, and -55dB at Hi-Z. 4-3/8" W x 9-3/8" H x 5-7/8" D, 1-1/4 lbs.

- Die cast zinc base painted in a complementary color
- Durable, rugged black Cycolac® housing
- Omni-directional pickup pattern
- Dynamic element
- Impedance: Hi-Z, 40k ohms; Lo-Z, 400 ohms

 Wide frequency response range of 50Hz - 12kHz with 2kHz boost







Dynamic vs. Electret Condenser

Microphones are transducers, or energy converters, which sense acoustic energy (sound waves) and convert them into electrical energy signals. There are two common methods for microphones to do this: 1) the electromagnetic technique used in dynamic type microphones, and 2) the electrostatic technique used in electret condenser type microphones.

Dynamic

Dynamic microphones consist of a coil of wire attached to a diaphragm that sits in a magnetic field that is created by a small magnet. When sound waves cause the diaphragm to vibrate, the motion of the coil within the magnetic field creates electrical signals that can be amplified or recorded.

These types of microphones produce a smooth, extended response, and provide good linearity. Their output level is high enough to work directly with most microphone inputs and have an excellent signal-to-noise ratio. They are rugged, reliable, and do not require batteries or external power supplies to operate.

Electret Condensers

Electret condenser microphones use a lightweight, permanently-polarized membrane and a fixed plate to create a capacitor. Sound waves cause the membrane to vibrate, which changes distance between the membrane and fixed plate causing a change in capacitance. Using a built-in electronic pre-amplifier circuit, the capacitance fluctuations are converted to electrical signals that can be amplified or recorded. Because of the built-in pre-amplifier, power must be supplied to the microphone externally. For convenience, the same shielded 2-conductor cable that carries the audio from the microphone is used to supply the DC voltage to the microphone's pre-amp circuit. This method of supplying power to the microphone is called "phantom power".

Electret condenser microphones respond quickly, have excellent linearity, and are very sensitive. They respond with clarity to transient sounds, provide a very uniform frequency response, and have an outstanding low-frequency pickup.

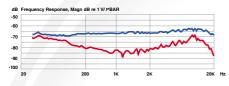


Gooseneck

Condenser Gooseneck Microphone GCU250

Slim and unobtrusive in design, this high-performance gooseneck provides smooth, noiseless, and precise microphone positioning. It exudes a speech-tailored frequency response with rich treble and bass. Minimal ambient and handling noise with high intelligibility to cut through noisy backgrounds and large gatherings. Reliable and efficient for clean, accurate vocal reproduction. Features integral windscreen, and an XLR connector located under mounting base. 18-1/4" H x 3/4" dia., 4 ounces.

- 15-1/4" adjustable neck
- Heavy all-metal case with non-glare black finish
- · Ultra-compact, rugged design
- · Cardioid pickup pattern
- Electret condenser element
- Phantom-power operated (9 52V DC)
- 250-ohm impedance
- Wide frequency response range of 50Hz - 18kHz
- Sensitivity of -68dB +/- 3dB





Industrial Gooseneck Microphone MGN19

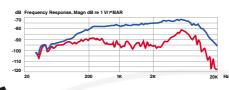
Designed to stand up under the most strenuous handling conditions, this gooseneck is extremely reliable and provides a natural crisp, highly-intelligible sound. Features 7 feet of four-conductor, two-shielded, permanently attached, synthetic jacketed cable, and a DPDT push-to-talk button-operated sealed microswitch mounted on the microphone housing. Voltage output is -76dB. 19" H x 1-3/8" dia. (mic body), 1-1/4 lbs.

- 19" flexible neck with mounting flange
- Chrome-plated screen and gooseneck, black Cycolac® cap and housing
- Durable, rugged construction
- Omni-directional pickup pattern
- Dynamic element
- 400-ohm impedance
- Frequency response is uniform from 50Hz - 12kHz with 2kHz boost
- Sensitivity of -76dB +/- 3dB

Dynamic Gooseneck Microphone GDU150

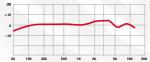
Attractive and elegant in design, this gooseneck microphone allows for smooth noiseless microphone positioning. Outstanding speech intelligibility, feedback rejection, user sound isolation, high sound pressure capability, and low sensitivity to breath/pop noise. Features a superior shock-mount system to reject handling and transmission noise, a built-in locking push-button on/off switch, and an integral multi-layer breath/wind filter. 19-1/4" H x 1-1/4" dia., 1 lb.

- 15-1/2" adjustable neck
- Durable all-metal case with non-glare black finish
- Rugged reliable construction
- Cardioid pickup pattern
- Dynamic element
- 500-ohm impedance
- Wide frequency response range of 100Hz - 12kHz
- Sensitivity of -75dB +/- 3dB













Accessories

Microphone Cables

MAC - Female XLR to stripped wires, 2-conductor plus shield; 25 feet long

XLR25 - Male XLR to female XLR, 2-conductor plus shield; 25 feet long

Microphone Stands

SF4 - Floor Stand - Round 10" dia. die cast base; 34" - 62" adjustable height, chrome-plated tubing; 8.5 lbs.

SB6 - Boom Stand - 30" adjustable boom arm; 34" - 62" adjustable height, chrome-plated tubing on a base of three 1-foot long legs; 4.5 lbs.

DS3 - Desk Stand - 4" high, chrome-plated tubing; 6" dia. die cast base; 2.5 lbs.

Microphone Mounts

MSM - Shock Mount - Low-profile, high-quality female XLR shock mount; 1-3/4" high \times 4-1/2" dia.; rubber and black plastic; 6 ounces

MFM - Flange Mount - Female XLR, non-shock mounted; 3-1/4" high x 1-3/4" dia. base; 3 ounces

Microphone Clips

MC27 - For use with handheld microphones HDU250, HDU150, HDO100

 $\mbox{MC22}$ - For use with instrument microphone HCU350

Bogen provides solutions for live sound needs covering a wide variety of applications.

Bogen's microphone line includes:

- High-quality, handheld models to meet the needs of every budget
- Traditional and contemporary desktop models for paging applications
- Gooseneck models for applications ranging from industrial to boardrooms
- Low-profile boundary and hanging models for special applications

For more than sixty-five years, Bogen Communications, Inc. has been a leading provider of commercial amplifiers, speakers, and intercom systems for music, paging, and educational applications.



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