

# Bogen Microphones High-Quality Sound Design



# Bogen High-Quality Microphones



# 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 and styles are available including gooseneck, desktop, handheld, wireless handheld/lavaliere, overhead hanging, and surfacemount microphones. Both contemporary and traditional designs provide accurate response and dependable performance, with optimum clarity.

## **Sensitivity Patterns**

Microphones pick up sound differently, based on the type of sensitivity pattern. There are two main types of microphones or patterns: 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.

## **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. 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.



#### **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.

#### **Electret Condensers**

Electret condenser microphones use a lightweight, permanentlypolarized membrane and a fixed plate to create a capacitor. Sound waves cause the membrane to vibrate, which changes the 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.

# HANDHELDS

# 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 cable noise, a rigid low-noise cable-mount system, a multi-layer breath/wind filter, and a lockable silent on/off reed switch. (7"  $D \times 2$ " dia., 13 oz.)

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





# 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.  $(6-1/2" D \times 1-1/2" dia., 13 oz.)$ 

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



# 300<sup>°</sup> <sup>0°</sup> <sup>30°</sup> <sup>60°</sup> 240<sup>°</sup> <sup>10°</sup> <sup>150°</sup>

# Handheld Public Address Microphone HD0100

Delivers smooth, professional sound. Provides a custom-tailored 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., 13 oz.)

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





# DESKTOP

# **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 lb.)

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







# **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.

(2-3/4" W x 3/4" H x 3-1/4" D, 11 oz.)

- · Heavy-duty metal case with matte black finish
- Cardioid pickup pattern
- · Electret condenser element
- Phantom power operated (9-52V DC)
- 250-ohm impedance
- · Frequency response range of 20 Hz - 18 kHz
- Sensitivity of -58 dB +/-3 dB
- 26' quad cable







# GOOSENECKS

# 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. ( $18 \cdot 1/2^{"}$  Long, 4 oz.)

- 5-1/2" adjustable lower stalk, with 9-1/2" rigid upper section
- · 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 50 Hz 18 kHz
- Sensitivity of -65 dB +/- 3 dB



300

210

180

# 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. (16-3/4" Long, 11 oz.)

- 10" long, fully flexible 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 100 Hz 12 kHz
- Sensitivity of -75 dB +/- 3 dB

# Industrial Gooseneck Microphone MGN19A

Designed to stand up under the most strenuous handling conditions, this gooseneck is extremely reliable and provides a natural crisp, highly-intelligible sound. Features a four conductor, two-shielded, permanently attached, synthetic jacketed cable, and a DPDT push-to-talk button-operated sealed microswitch mounted on the microphone housing. (23-1/2" Long, 1-1/4 lb.)

- 19" flexible neck with mounting flange
- · Black screen housing and gooseneck
- Durable, rugged construction
- Omni-directional pickup pattern
- Dynamic element
- 500-ohm impedance
- Frequency response is uniform from 50 Hz 12 kHz with 1.5 kHz boost
- Sensitivity of -70 dB +/-3 dB



300

240

210

150

180°

270





# WIRELESS SYSTEMS

## **UHF PLL Single Channel Wireless Microphone Systems**

# UHF8011HH, UHF8011BP

Bogen's Wireless Microphone Systems offer users the freedom to move around while speaking. System choices consist of a 1440-channel synthesized UHF PLL Receiver with either a hand held microphone or a body-pack transmitter with a lavaliere microphone.



# WIRELESS SYSTEM COMPONENTS

UHF Reciever, Handheld Microphone, Body-Pack Transmitter, and Lavaliere Microphone can be purchased separately as individual items.

#### UDR8011 Single Channel UHF PLL Receiver

- Offers 1,440 user-selectable frequencies in UHF 470-960 MHz; 120 dB dynamic range; operation up to 500 ft. line-of-sight
- Antenna diversity for maximum range and dropout protection, LCD screen, 1/4" unbalanced and XLR balanced outputs, noiseless transmitter ON/OFF switching, and digital level control for output

#### **UHT8011** Wireless Handheld Microphone

- Sleek housing with internal antenna for optimum aesthetics and durable long life
- Unidirectional dynamic cartridge for optimum sound, maximum feedback rejection, and minimal handling noise
- Audio mute switch allows convenient audio muting while leaving the transmitter "ON"
- LED and LCD display
- Convenient, economical operation with two (2) AA alkaline or NiMH batteries (not included)
- 10-1/2" long x 2" dia.; 10 oz.

- Half-rack receiver design with detachable, rear dual antennas, powered by wall power adapter (included)
- Base unit: 8" W x 1-5/8" H x 6-1/2" D; 1 lb.
- Detachable Antenna: 12" Long (fully extended); 4 oz.

#### **UBP8011 Body-Pack Transmitter**

- Audio mute switch allows convenient audio muting while leaving the transmitter "ON"
- LED and LCD display
- 4-Pin, Mini-XLR connection
- Convenient, economical operation with two (2) AA alkaline or NiMH batteries (not included)
- 2-1/4" W x 4" H x 1" D; 2.8 oz. (without batteries)

Lavaliere Microphone (Model BCLM1) and Headset Microphone (Model UHFHSM-B) sold separately.

#### **BCLM1** Lavaliere Microphone

- Condenser Mic for use with UBP8011 Body-Pack
- Windscreen Mic cover; body attachment clip
- 5-foot long, 4-Pin mini-XLR connector cable
- Round 0.5" dia. x 1"; 4 oz.

# ACCESSORIES











## **Stands**

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

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

#### Mounts

MSM - Shock Mount - For use with GCU250 & GDU150; Low-profile, high-quality female XLR shock mount; 4-3/4" W x 1-3/4" H x 4" D.; rubber and black plastic

#### Clips

**MC27** - For use with the HD-Series handheld microphones; Black, flexible, impact-resistant plastic

## **Foam Windscreens**

WSGCU250 - For use with gooseneck microphone GCU250

## **Cables**

**MAC** - For use with handheld microphones; Female XLR to stripped wires, 2-conductor plus shield; 25 feet long

XLR25 - For use with handheld microphones; Male XLR to female XLR, 2-conductor plus shield; 25 feet long



#### **Wireless Microphones**

**BCLM1 -** Condenser Lavaliere Microphone - Round 0.5" dia. x 1" microphone, 2" connector, 5 feet long connector cable

RPK900 - Single/Dual Unit Rack Mount Kit - 19" W x 1.73" H, two (2) - 8.4" open areas for unit, single unit blank panel included

UHFADS - Antenna Distribution System - 19" W x 1.73" H x 9.8" D

**UHFASA** - Antenna Signal Amplifier - 3" W x 0.75" H x 3" D (Antenna & Rack Mount Kit Excluded)

UHFDCD - Dual Charging Dock - 6.5" W x 3" H x 4" D

UHFHSMB - Headset Microphone (Black) - 5" W x 5.25" H x 6" D

UHFUDA - Unidirectional Antenna - 14.2" W x 13.9" H x 1.5" D

# **Bogen High-Quality Microphones**

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
- Desktop model for paging applications
- · Gooseneck models for applications ranging from industrial to boardrooms
- Low-profile boundary model for special applications
- Wireless Microphone Systems

For more than 85 years Bogen Communications, Inc. has been a leading provider of commercial amplifiers, speakers, and intercom systems for music, paging, and educational applications.



55-0101-01P 2012 ©2007-2020 Bogen Communications, Inc. All rights reserved. Specifications subject to change without notice.