

SHURE®

LEGENDARY
PERFORMANCE™

Installed Microphones

Easyflex | **Microflex**

Microflex Microphones

There's never been a more flexible choice



Work a room in more ways than ever with Shure Microflex microphones. Combining sleek, low profile aesthetics and a complete selection of microphones and mounting options, the Microflex line offers the highest standard of quality and efficiency for installed audio applications.

Microflex Gooseneck Microphones

- 5" (127 mm), 10" (254 mm), 12" (305 mm), and 18" (457 mm) models fit a wide variety of applications from the podium to the conference table
- Interchangeable condenser cartridges ensure superior audio quality

Microflex Boundary Microphones

- Multi-element mic, low-profile "button" mic, or wireless mic styles available
- Extremely versatile range of placement options for easy configuration and installation

Microflex Overhead Microphones

- Compact and adjustable 4" (102 mm) gooseneck
- Versatile condenser cartridges for accurate sound reproduction in any setting

Microflex Lavalier Microphones

- Exceptionally low handling noise
- Use in wired or wireless applications

APPLICATIONS

Conference rooms

Seminars

Houses of Worship

Theatres

Lecterns

PRODUCT HIGHLIGHTS

Wide selection for
customized installations

Wired or wireless
models available

Superior audio quality

CommShield™
Technology for
improved RF resistance

Sleek, low-profile
designs



CommShield™
Technology

MX405 and MX410 Miniature Gooseneck Microphones

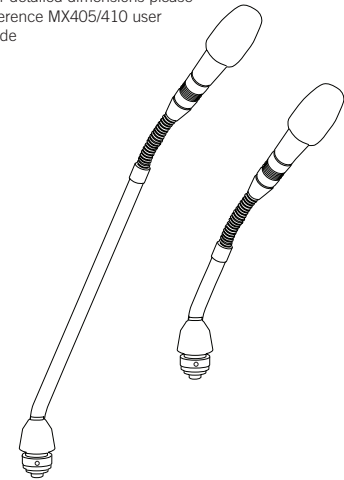
Overview

Flexible in more ways than one, Microflex Miniature Gooseneck microphones deliver unsurpassed style and performance for conference rooms and similar applications. Offering desktop or mounted bases, wired or wireless options, and even interchangeable cartridges, it's easy to get the perfect fit for your conferencing installation. Fully compatible with SLX® wireless systems, including the SLX4L wireless receiver with logic output for applications requiring logic functionality.

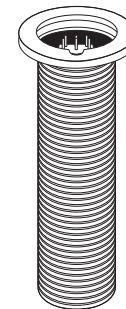
Specifications (subject to change)

Type	Condenser (electret bias)
Frequency Response	50–17000 Hz
Polar Pattern (at 1 kHz)	MX405/C, MX410/C: Cardioid MX405/S, MX410/S: Supercardioid
Output Impedance	EIA Rated at 150 Ω (170 Ω actual)
Output Configuration	Active Balanced
Sensitivity (at 1 kHz, open circuit voltage)	Cardioid: -35 dBV/Pa (18 mV) Supercardioid: -34 dBV/Pa (21 mV) 1 Pascal=94 dB SPL
Maximum SPL (1 kHz at 1% THD, 1 kW load)	Cardioid: 121 dB Supercardioid: 120 dB
Equivalent Output Noise (A-weighted)	Cardioid: 28 dB SPL Supercardioid: 27 dB SPL
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	Cardioid: 66 dB Supercardioid: 68 dB
Dynamic Range (1 kW load at 1 kHz)	93 dB
Common Mode Rejection (10 Hz to 100 kHz)	45 dB minimum
Preamplifier Output Clipping Level (1% THD)	-8 dBV (0.4 V)
Polarity	3-Pin XLR: Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector. 5-Pin XLR: Positive sound pressure on diaphragm produces positive voltage on pin 4 relative to pin 2 of output XLR connector.
Weight	MX405: 0.054 kg (0.119 lbs) MX410: 0.068 kg (0.150 lbs) MX400DP: 0.516 kg (1.138 lbs) MX400SMP (w/ Kit): 0.125 kg (0.275 lbs)
Logic Connections	LED IN: Active low (∕ 1.0V), TTL compatible. Absolute maximum voltage: -0.7V to 50V. LOGIC OUT: Active low (∕ 1.0V), sinks up to 20mA, TTL compatible. Absolute maximum voltage: -0.7V to 50V (up to 50V through 3kΩ).
Mute Switch Attenuation	-50 dB minimum
Cable	MX400DP: 6.1 m (20 ft) attached cable with shielded audio pair terminated at a 3-pin male XLR and three unterminated conductors for logic control
Environmental Conditions	Operating Temperature: -18–57 °C (0–135 °F) Storage Temperature: -29–74 °C (-20–165 °F) Relative Humidity: 0–95%
Power Requirements	48–52 Vdc phantom, 8.0 mA

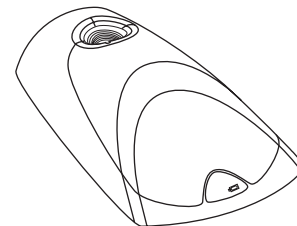
*for detailed dimensions please reference MX405/410 user guide



MX410 and MX405
Miniature Goosenecks



MX400SMP
Surface Mount Preamp



MX400DP
Wired Desktop Base (also available as MX890 Wireless Desktop Base)

Available Models

The polar pattern of the cartridge is indicated by the model number suffix: C = Cardioid, S = Supercardioid, N = No Cartridge

MX405/C, MX405/S	5 inch (127 mm) Gooseneck, bi-color status indicator ring, includes surface mount preamp
MX405R/N	5 inch (127 mm) Gooseneck, light ring, includes surface mount preamp
MX410/C, MX410/S	10 inch (254 mm) Gooseneck, bi-color status indicator ring, includes surface mount preamp
MX410R/N	10 inch (254 mm) Gooseneck, no cartridge, light ring, includes surface mount preamp
MX405LP/C, MX405LP/S	5 inch (127 mm) Gooseneck, bi-color status indicator ring, less preamp
MX405RLP/N	5 inch (127 mm) Gooseneck, no cartridge, light ring, less preamp
MX410LP/C, MX410LP/S	10 inch (254 mm) Gooseneck, cardioid, bi-color status indicator ring, less preamp
MX410RLP/N	10 inch (254 mm) Gooseneck, no cartridge, light ring, less preamp

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MX412 and MX418 Standard Gooseneck Microphones

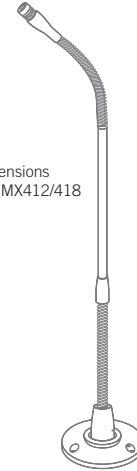
Overview

Microflex Standard Gooseneck microphones provide the added length and flexibility needed for speakers in environments like lecterns, pulpits, and courtrooms. Available in four models with a variety of heights and mounting styles to choose from, Microflex Gooseneck microphones feature high sensitivity and balanced, transformerless output for maximum resistance to electromagnetic hum and RF interference, even over long cable runs.

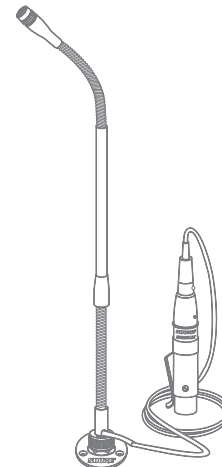
Specifications (subject to change)

Type	Condenser (electret bias)
Frequency Response	50–17000 Hz
Polar Pattern (at 1 kHz)	MX412/C, MX418/C: Cardioid MX412/S, MX418/S: Supercardioid Omnidirectional cartridge available separately
Output Impedance	EIA Rated at 150 Ω (170 Ω actual)
Sensitivity (at 1 kHz, open circuit voltage)	Cardioid: -35 dBV/Pa (17.8 mV) Supercardioid: -33.5 dBV/Pa (21.1 mV) Omnidirectional: -27.5 (42.2 mV) 1 Pascal=94 dB SPL
Maximum SPL (1 kHz at 1% THD, 1 kΩ load)	Cardioid: 124.2 dB Supercardioid: 122.7 dB Omnidirectional: 116.7 dB
Equivalent Output Noise (A-weighted)	Cardioid: 28 dB SPL Supercardioid: 26.5 dB SPL Omnidirectional: 20.5 dB SPL
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	Cardioid: 66 dB Supercardioid: 67.5 dB Omnidirectional: 73.5 dB
Dynamic Range (1 kΩ load at 1 kHz)	96.2 dB 100 dB at 0 gain
Common Mode Rejection	45 dB minimum (10 Hz to 100 kHz)
Preamplifier Output Clipping Level	-6 dBV (0.5 V) (1% THD)
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector.
Mute Switch Attenuation	-50 dB minimum
Cable	MX412D and MX418D: The 3 m (10 ft) attached custom cable contains a shielded audio pair and three unshielded conductors for logic control. Overall diameter=0.6 mm (0.165 in.)
Environmental Conditions	Operating Temperature Range: -18° to 57° C (0° to 135° F) Relative Humidity: 0 to 95%
Power Requirements	48-52 Vdc phantom, 8.0 mA

*for detailed dimensions please reference MX412/418 user guides



MX418
Gooseneck with attached preamp and shockmount



MX418SE
Gooseneck with In-line Preamp and Side Exit Cable



MX412D
Gooseneck with Attached Desktop Base

Available Models

The polar pattern of the cartridge is indicated by the model number suffix: C = Cardioid, S = Supercardioid, N = No Cartridge

MX412/C, MX412/S, MX412/N	12 inch (304.8 mm) Gooseneck, Attached XLR Preamp, Shock Mount, Flange Mount, Snap-fit Foam Windscreen
MX418/C, MX418/S, MX418/N	18 inch (457.2) Gooseneck, Attached XLR Preamp, Shock Mount, Flange Mount, Snap-fit Foam Windscreen
MX412S/C, MX412S/S, MX412S/N	12 inch (304.8 mm) Gooseneck, Attached XLR Preamp, Shock Mount, Flange Mount, Snap-Fit Foam Windscreen, Mute Switch, LED Indicator
MX418S/C, MX418S/S, MX418S/N	18 inch (457.2) Gooseneck, Attached XLR Preamp, Shock Mount, Flange Mount, Snap-Fit Foam Windscreen, Mute Switch, LED Indicator
MX412SE/C, MX412SE/S, MX412SE/N	12 inch (304.8 mm) Gooseneck, In-Line Preamp, Shock Mount, Flange Mount, 10-ft Side-Exit (or Bottom-Exit) Cable, Snap-Fit Foam Windscreen
MX418SE/C, MX418SE/S, MX418SE/N	18 inch (457.2) Gooseneck, In-Line Preamp, Shock Mount, Flange Mount, 10-ft Side-Exit (or Bottom-Exit) Cable, Snap-Fit Foam Windscreen
MX412D/C, MX412D/S, MX412D/N	12 inch (304.8 mm) Gooseneck, Desktop Base with 10 foot Cable, Logic Functions, Programmable Switch and LED Indicator, Snap-Fit Foam Windscreen
MX418D/C, MX418D/S, MX418D/N	18 inch (457.2) Gooseneck, Desktop Base with 10 foot Cable, Logic Functions, Programmable Switch and LED Indicator, Snap-Fit Foam Windscreen

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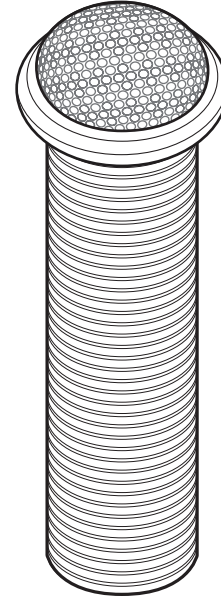
MX395 Low Profile Boundary Microphones

Overview

The Microflex Low Profile Boundary microphone is an ideal table microphone when minimal presence is of high priority. Perfect for meeting rooms, these microphones deliver exceptional sound pickup while barely being noticed. Choose from a selection of colors and pickup patterns for customized table and ceiling installations.

Specifications (subject to change)

Type	Condenser (electret bias)
Frequency Response	50–17000 Hz
Polar Pattern (at 1 kHz)	MX395/O: Omnidirectional MX395/C: Cardioid MX395/BI: Bidirectional
Output Impedance	EIA Rated at 150 Ω (170 Ω actual)
Output Configuration	Active Balanced
Sensitivity (at 1 kHz , open circuit voltage) 1 Pascal=94 dB SPL	Cardioid: -35 dBV/Pa (18 mV) Omnidirectional: -28 dBV/Pa (42 mV) Bidirectional: -37 dBV/Pa (14 mV)
Maximum SPL (1 kHz at 1% THD, 1 k Ω load)	Cardioid: 121 dB Omnidirectional: 114 dB Bidirectional: 123 dB
Equivalent Output Noise (A-weighted)	Cardioid: 28 dB SPL Omnidirectional: 21 dB SPL Bidirectional: 29 dB
Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)	Cardioid: 66 dB Omnidirectional: 75 dB Bidirectional: 65 dB
Dynamic Range (1 k Ω load at 1 kHz)	Cardioid: 93 dB Omnidirectional: 93 dB Bidirectional: 94 dB
Common Mode Rejection	45 dB minimum (10 Hz to 100 kHz)
Preamplifier Output Clipping Level	-8 dBV (0.4 V) (1% THD)
Polarity	3-Pin XLR: Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector. 5-Pin XLR: Positive sound pressure on diaphragm produces positive voltage on pin 4 relative to pin 2 of output XLR connector.
Weight	Net: .136 kg (.30 lb) Packaged: 0.374 kg (0.825 lbs)
Logic Connections	LED IN: Active low (∇ 1.0V), TTL compatible. Absolute maximum voltage: -0.7V to 50V.
Environmental Conditions	Operating Temperature: -18–57 °C (0–135 °F) Storage Temperature: -29–74 °C (-20–165 °F) Relative Humidity: 0–95%
Power Requirements	MX395: 11–52 Vdc phantom, 2.0 mA MX395-LED: 48–52 Vdc phantom, 8.0 mA



MX395
Low Profile
Boundary Mic
Diam. x H: 1 1/4" (32 mm) x 4" (102 mm)

Available Models

The polar pattern of the cartridge is indicated by the model number suffix: C = Cardioid, O = Omnidirectional, BI = Bidirectional

MX395B/C, MX395B/BI, MX395B/O	Black, 3-pin XLR
MX395AL/C, MX395AL/BI, MX395AL/O	Aluminum, 3-pin XLR
MX395W/O	White, 3-pin XLR
MX395B/C-LED, MX395B/BI-LED, MX395B/O-LED	Black, 5-pin XLR, logic-controlled muting functions, Bi-color Status Indicator Ring

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MX690 Wireless Boundary and MX890 Wireless Desktop Base

Overview

The Microflex Wireless Boundary microphone offers total freedom of placement with no holes to drill or cables to run for installation. The Wireless Boundary Microphone is the perfect solution for conference and meeting spaces where users demand flexibility and high performance. Compatible with Shure SLX® wireless systems, including the SLX4L receiver with logic output for applications requiring logic functionality.

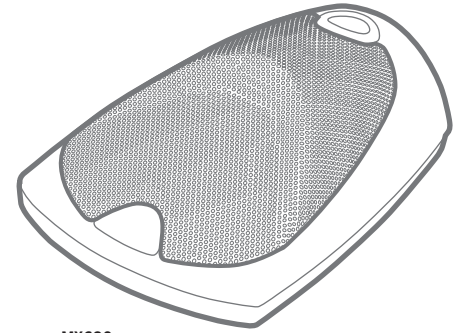
Specifications (subject to change)

MX690 Microphone Specifications

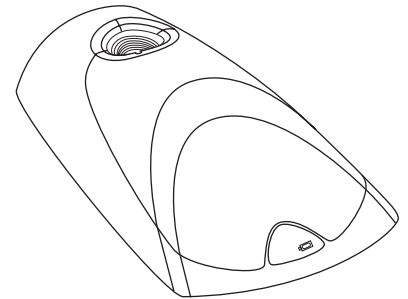
Type	Condenser (electret bias)
Frequency Response	50–17000 Hz
Polar Pattern (at 1 kHz)	Cardioid
Sensitivity (at 1 kHz, open circuit voltage)	–33 dBV/Pa (33 mV) 1 Pascal=94 dB SPL
Dynamic Range	96 dB (1 kΩ load at 1 kHz)
Common Mode Rejection	45 dB minimum (10 Hz to 100 kHz)
Preamplifier Output Clipping Level	–6 dBV (0.5 V) (1% THD)
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector or tip of 1/4" phone plug.

MX690 and MX890 Transmitter Specifications

Operating Range	30 m (100 ft.) Note: Actual range depends on RF signal absorption, reflection, and interference
Frequency Stability	±10 ppm
Maximum Frequency Deviation	45 kHz
Oscillator Type	Phase-locked loop (PLL) controlled synthesizer
Power Requirements	3V (2 AA alkaline or rechargeable batteries)
Battery Life	18 hours (alkaline)
Power Consumption	130 mA, ±15 mA
Operating Temperature Range	–18–57 °C (0–135 °F) Note: Battery may limit this range
Dimensions	43 mmH x 87 mmW x 148 mmD (1 11/16 x 3 3/8 x 5 13/16 in.)
Weight	Net: 318 g (11.2 oz) Packaged: 516 g (18.2 oz)



MX690
Wireless Boundary Mic
L x W x H: 5 13/16" x 3 3/8" x 1 11/16"
(148 mm x 87 mm x 43 mm)



MX890
Wireless Desktop Base
L x W x H: 5 3/4" x 3 7/16" x 1 11/16"
(146 mm x 87 mm x 43 mm)

Available Models

MX690	Wireless Boundary Microphone, cardioid, mute switch
MX890	Wireless Desktop Base for MX405 and MX410 models, mute switch

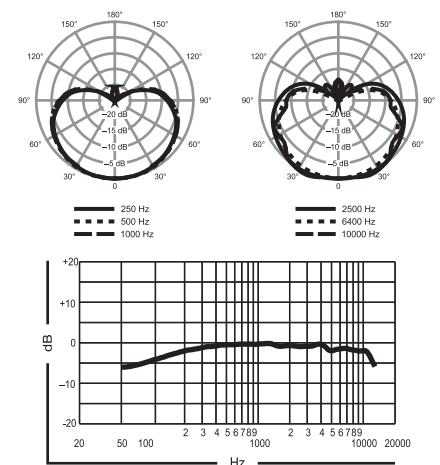
Optional Accessories

SLX4	Wireless Diversity Receiver	SLX4L	Wireless Diversity Receiver with Logic Output
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Architectural Specifications

MX690 – The microphone shall be a surface mounted, black condenser microphone with a cardioid polar pattern. The microphone shall have an integrated wireless transmitter for audio signals with switchable carrier frequencies as well as preprogrammed groups up to 12 compatible channels. An infrared signal shall be used to synchronize the frequency between transmitter and receiver. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency range shall be 50Hz to 17KHz and the sensitivity shall be 33 mV/Pa.

MX890 - The wireless desk stand shall be a transmitter base for audio signals with switchable carrier frequencies as well as preprogrammed groups with up to 12 compatible channels. An infrared signal shall be used to synchronize the frequency between transmitter and receiver. The wireless desk stand shall be used with the MX405 and MX410 series gooseneck microphones.



MX690

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MX202 Overhead Microphones

Overview

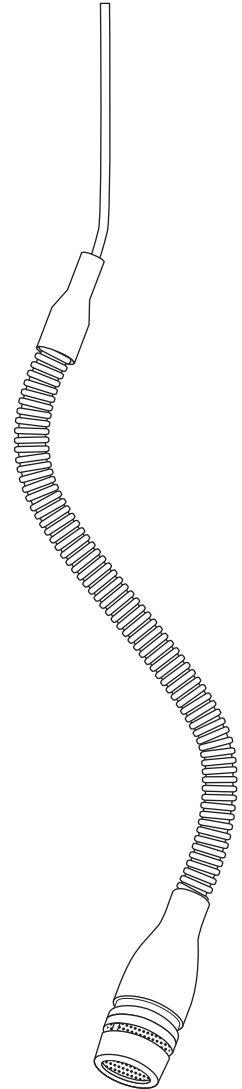
Easily hung from ceilings, Microflex Overhead microphones capture sound from speakers, choirs, stages, and more conveniently and unobtrusively from above. Compact and flexible, Overhead microphones each feature a 4" (102 mm) gooseneck, multiple preamp options for easy installation into ceilings or microphone stands, and versatile condenser cartridges for accurate sound reproduction in any setting.

Specifications (subject to change)

Type	Condenser (electret bias)
Frequency Response	50–17000 Hz
Polar Pattern (at 1 kHz)	MX202/C: Cardioid MX202/O: Omnidirectional MX202/S: Supercardioid
Output Impedance	180 Ω actual (EIA rated at 150 Ω)
Sensitivity (at 1 kHz, open circuit voltage)	Cardioid: -35.0 dBV/Pa (17.8 mV) Supercardioid: -33.5 dBV/Pa (21.1 mV) Omnidirectional: -27.5 dBV/Pa (42.2 mV) All values -12 dB at 0 gain *1 Pascal = 94 dB SP
Maximum SPL (1 kHz at 1% THD, 1 k Ω load) All values +6 dB at 0 gain	Cardioid: 124.2 dB Supercardioid: 122.7 dB Omnidirectional: 116.7 dB
Equivalent Output Noise (A-weighted)	Cardioid: 28.0 dB SPL Supercardioid: 26.5 dB SPL Omnidirectional: 20.5 dB SPL
Signal to Noise Ratio (referenced at 94 dB SPL)	Cardioid: 66.0 dB Supercardioid: 67.5 dB Omnidirectional: 73.5 dB
Dynamic Range (1 μ W load at 1 kHz)	96.2 dB (100 dB at 0 gain)
Common Mode Rejection (10 Hz to 100 kHz)	45 dB minimum
Preamplifier Output Clipping Level (1% THD)	-6 dBV (0.5 V)
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output connector.
Power Requirements	11 to 52 Vdc phantom, 2.0 mA
Environmental Requirements	Operating Temperature Range: -18° C to 57° C (0° F to 135° F) Relative Humidity: 0 to 95%

Available Models

MX202B/C, MX202B/S, MX202B/O	Black mini-condenser microphone; includes cable, in-line preamplifier, and stand adapter.
MX202W/C, MX202W/S, MX202W/O	White mini-condenser microphone; includes cable, in-line preamplifier, and stand adapter.
MX202BP/C, MX202BP/S, MX202BP/O	Black mini-condenser microphone; includes cable and plate-mounted preamplifier.
MX202WP/C, MX202WP/S, MX202WP/O	White mini-condenser microphone; includes cable and plate-mounted preamplifier.



MX202
Overhead mic
Diam.: .46" (11.7 mm)
L: 5.69" (144.5 mm)

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