

**SHURE**<sup>®</sup>

LEGENDARY  
PERFORMANCE™



Microflex<sup>®</sup> Microphones

**THERE'S NEVER BEEN  
A MORE FLEXIBLE CHOICE.**



# MICROFLEX® MICROPHONES: WORK A ROOM IN MORE WAYS THAN EVER.

Combining sleek, low profile aesthetics and a complete selection of microphones and mounting options, Microflex microphones include the highest standard of quality and efficiency for installed audio applications.

Get the exact fit for your professional installation; knowing it's backed by the superior sound quality, reliability, and durability you only get from Shure.

## The New Height of Flexibility.

### MX405/MX410/MX415 Modular Gooseneck Microphones

Flexible in more ways than one, Microflex Modular 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.

- Available in 5 inch (12.7 cm), 10 inch (25.4 cm) and 15 inch (38.1 cm) lengths
- Cardioid and supercardioid polar patterns
- Bi-color status indicator (standard models) or single color light ring ("R" models)
- Programmable mute switch (desktop models only)
- Logic input/output for remote LED and mute control dependent on base option
- Surface-mount and wired or wireless desktop base options



MX415, MX410 and MX405 with MX890 Wireless Desktop Base



MX405 (with MX400SMP), MX410 (with MX400DP), MX415 without base

#### Available Models

**MX405 C/S**

5 inch (12.7 cm), includes surface mount preamp

**MX405R N**

5 inch (12.7 cm), includes light ring, surface mount preamp

**MX405LP C/S**

5 inch (12.7 cm), less preamp

**MX405RLP N**

5 inch (12.7 cm), light ring, less preamp

**MX410 C/S**

10 inch (25.4 cm), includes surface mount preamp

**MX410R N**

10 inch (25.4 cm), includes light ring, surface mount preamp

**MX410LP C/S**

10 inch (25.4 cm), less preamp

**MX410RLP N**

10 inch (25.4 cm), light ring, less preamp

**MX415 C/S**

15 inch (38.1 cm), includes surface mount preamp

**MX415R N**

15 inch (38.1 cm), includes light ring, surface mount preamp

**MX415LP C/S**

15 inch (38.1 cm), less preamp

**MX415RLP N**

15 inch (38.1 cm), light ring, less preamp

#### Mounting Options

**MX400DP**

Desktop Base

**MX890**

Wireless Desktop Base

**MX400SMP**

Surface mount Preamp

C = Cardioid, S = Supercardioid, N = No Cartridge

The MX890 Wireless Desktop Base is compatible with SLX4 and SLX4L Wireless Receivers.





## One Microphone That Performs Like Many.

### MX396

#### Multi Element Boundary Microphone

The Microflex® Multi-Element Boundary microphone delivers a unique and versatile tool for conference room installations. Clean and simple in appearance, Multi-Element Boundary mics come in two or three element configurations, combining the coverage of multiple microphones into one small, compact package.

- Multiple coverage patterns (see diagram below)
- Individual audio output for each element
- Bi-color status indicator
- Programmable mute switch
- TTL Logic LED input and TTL Logic switch output

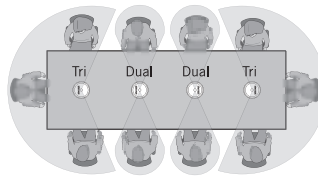
#### Available Models

##### MX396 C-DUAL

Dual-Element Configuration

##### MX396 C-TRI

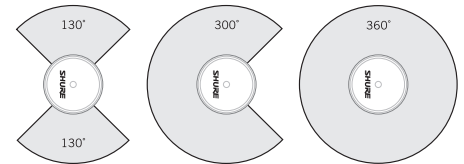
Tri-Element Configuration



Example of Boardroom Table Mic Placement Coverage



Side view



Cross-Table Coverage (Dual)

End-of-Table Coverage (Tri)

Center-of-Table Coverage (Tri)

## Wireless. Limitless.

### MX690

The Microflex Wireless Boundary microphone offers total freedom of placement with no holes to drill or cables to run for installation. It 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.

- Sleek, low profile design
- Frequency agile, microprocessor controlled transmitter
- Bi-color status indicator
- IR link to SLX receiver for automatic frequency synchronization
- Programmable mute function
- Battery level indicator
- Operates on two AA batteries
- TTL Logic transmitter status and TTL Logic battery level signal when used with SLX4L wireless receiver

#### Available Models

##### MX690

Wireless Boundary Mic, Cardioid



Front view



Side view

# A Microphone That Goes Above and Beyond.

## MX202

### Overhead Microphones

Microflex® Overhead microphones capture sound from speakers, choirs, and stages conveniently and unobtrusively from above. Compact and flexible, each feature a four-inch gooseneck and versatile condenser cartridges for accurate sound reproduction in any setting. The available preamp options offer easy installation in ceilings or microphone stands, and provide accurate, reliable sound reproduction.

- Cardioid and supercardioid polar patterns
- Interchangeable condenser cartridges
- Inline or plate mount preamp
- Optional desk stand also available



#### Available Models

##### MX202B C/S/N

Black In-line preamplifier, stand adapter

##### MX202W C/S/N

White In-line preamplifier, stand adapter

##### MX202BP C/S/N

Black Plate-mounted preamplifier

##### MX202WP C/S/N

White Plate-mounted preamplifier

#### Mounting Options

##### A202BB

Microphone Desk/Table Stand

C = Cardioid, S = Supercardioid, N = No Cartridge



## Freedom To Move, Freedom To Hear.

## MX150

## MX183/MX184/MX185

### Lavalier Microphones

Attached to a tie or lapel, Microflex Lavalier microphones offer freedom of movement to any situation involving voice reproduction. As stylish as they are convenient, lavaliers are available in a wide array of sizes, including two subminiature microphone models, and are compatible with all Shure wireless platforms.

- Cardioid, supercardioid and omnidirectional polar patterns
- Phantom-powered preamp
- Exceptionally low handling noise
- Includes tie clip, dual tie clip and snap-fit windscreen



#### Available Models

##### MX150/O

Subminiature Omnidirectional

##### MX150/C

Subminiature Cardioid

##### MX180/N

No Cartridge

##### MX183

Omnidirectional

##### MX184

Supercardioid

##### MX185

Cardioid



# Low Profile, High Reliability.

## MX153

### Earset Headworn Microphone

The Shure Microflex® MX153 is a professional subminiature earset microphone ideal for speech and other applications requiring low-profile discreet placement where improved gain before feedback over lavalier microphones is desired. Delivering exceptional speech clarity, the MX153 is ideal for corporate presentations, houses of worship, AV conferencing and live sound reinforcement.

- Subminiature, omnidirectional cartridge offers superior speech clarity
- Ultra-lightweight, comfortable, flexible design is easy to place over either ear
- Kevlar reinforced, soft flex cable
- Matte Black, Tan, and Cocoa color options available



#### Available Models

##### MX153/BO-TQG

Black

##### MX153/CO-TQG

Cocoa

##### MX153/TO-TQG

Tan



# THE SOUND HEARD AROUND THE WORLD.

Shure has long been the global leader in providing audio solutions for all types of commercial installations. Whether in churches, schools, boardrooms, or courtrooms, you'll find Microflex microphones providing superior audio and Shure's world-class service and support.



Utilized for everything from auditoriums to band rooms, Microflex microphones have delivered exceptional audio quality to the hallowed halls of academia for years. By providing the educational institutions of the world

with exceptional quality products, Shure tirelessly commits themselves to delivering unparalleled service and support.



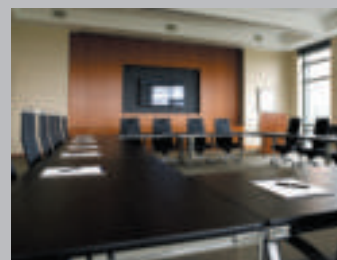
Microflex microphones have adorned the podiums and committee rooms of government institutions around the world. From lavaliers to overheads to goosenecks, Shure audio products deliver

exceptional sound and afford maximum flexibility in even the most acoustically challenging environments.



Proven reliable in installations worldwide, Microflex microphones are well suited to meet the diverse audio requirements of any House of Worship. Ideal for choirs, lecterns, and altars, all Microflex

products are both attractive and inconspicuous and deliver the superior sound quality you can expect from Shure.



Microflex microphones provide solutions for meeting rooms, video conferences, large presentations or any other situation the business world throws at you. Gooseneck mics meet the needs of any

size conference table while low-profile boundary mics are discreet and unobtrusive yet provide crystal clear audio. Additionally, CommShield™ technology guards against unwanted interference.

# COMMSHIELD® TECHNOLOGY IMPROVES RF RESISTANCE.

All Microflex® models offer CommShield Technology, which guards against unwanted radio interference from consumer wireless devices such as cell phones and PDA's. Shure engaged their development teams to redesign Microflex microphones to be highly resistant to radio frequency interference such as might be experienced with GSM cell phone technology and to implement design techniques such as multilayer circuit boards, improved grounding techniques, tighter enclosures for improved shielding, and improved microphone cable and audio connectors. The combination of improved techniques is utilized to deliver Microflex microphones that are highly resistant to intense nearby radio signals.



## Compact, Clear, and Connected.

### MX391/MX392/MX393

#### Wired Boundary Microphones

With slim design and superior audio reproduction, Microflex Boundary microphones are the ideal conference room solution. Features include programmable, silent membrane switches, interchangeable cartridges, logic inputs and outputs, and LED indicators – Microflex Boundary microphones provide high-quality sound for a wide range of applications.

- Cardioid, supercardioid and omnidirectional polar patterns
- Select models available in black or white
- Programmable, silent membrane switch
- TTL Logic LED input and TTL Logic switch output (MX392 only)
- LED indicator (MX392, MX393)

#### Available Models

##### MX391 C/S/O

Black Attached cable w/ 4-pin mini connector, Preampifier

##### MX391W C/S/O

White Attached cable w/ 4-pin mini connector, Preampifier

##### MX392 C/S/O

Surface-mount microphone, Attached unterminated cable

##### MX392BE C/S/O

Surface-mount microphone, Attached bottom exit cable

##### MX393 C/S/O

Surface-mount microphone, Mini 3-pin connector cable

C = Cardioid, S = Supercardioid, O = Omnidirectional



MX391

MX392

MX393



MX392BE side

MX392BE front

## Inconspicuously Impressive.

### MX395

#### Low Profile Boundary Microphone

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.

- Only 1.25 inch (3.175 cm) in diameter
- Cardioid, omni and bidirectional polar patterns
- Wide dynamic range and smooth frequency response
- Available in black, white and aluminum
- Bi-color status indicator (select models)
- TTL Logic LED input and TTL Logic switch output

#### Available Models

##### MX395B C/O/BI

Black

##### MX395AL C/O/BI

Aluminum

##### MX395W O

White

##### MX395B O/C/BI-LED

Black, with bi-color status indicator

C = Cardioid, O = Omnidirectional, BI = Bidirectional



Side view

# Unmatched Flexibility. Unbending Performance.

## MX412/MX418 Standard Gooseneck Microphones

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.

- Available in 12 inch (30.5 cm) and 18 inch (45.7 cm) lengths
- Interchangeable cartridges provide the right polar pattern for every application
- Locking flange mount for permanently securing microphone to surfaces
- Snap-fit foam windscreens
- Shock mount provides over 20 dB isolation from surface vibration noise
- Models available with attached preamp, in-line preamp, or desktop base



### Available Models

#### MX412 C/S/N

12 inch (30.5 cm), Attached Preamp

#### MX412S C/S/N

12 inch (30.5 cm), Attached Preamp, Mute Switch

#### MX412SE C/S/N

12 inch (30.5 cm), In-Line Preamp,  
10 foot (3.0 m) Side-Exit Cable

#### MX412D C/S/N

12 inch (30.5 cm), Desktop Base  
with 10 foot (3.0 m) Cable

#### MX418 C/S/N

18 inch (45.7 cm), Attached Preamp

#### MX418S C/S/N

18 inch (45.7 cm), Attached Preamp, Mute Switch

#### MX418SE C/S/N

18 inch (45.7 cm), In-Line Preamp,  
10 foot (3.0 m) Side-Exit Cable

#### MX418D C/S/N

18 inch (45.7 cm), Desktop Base  
with 10 foot (3.0 m) Cable

C = Cardioid, S = Supercardioid, N = No Cartridge

# Microflex Microphones Specifications (Note: All specifications are subject to change.)

	MICROFLEX Lavalier/Headset Microphones	MX200 Overhead Microphones	MX391/392/393 Boundary Microphones	MX395/396 Boundary Microphones	MX400 Gooseneck Microphones	MX690 Boundary Microphone
<b>Type</b>	Condenser (electret bias )	Condenser (electret bias )	Condenser (electret bias )	Condenser (electret bias )	Condenser (electret bias )	Condenser (electret bias )
<b>Frequency Response</b>	MX185/184/183: 50–17000 Hz MX150: 20–20000 Hz MX153: 20–20000 Hz	50–17000 Hz	50–17000 Hz	50–17000 Hz	50–17000 Hz	50–17000 Hz
<b>Output Impedance</b>	MX185/184/183: EIA rated at 150 Ω (170 Ω actual) MX150: 165.5 Ω MX153: N/A	180 Ω actual (EIA rated at 150 Ω)	EIA Rated at 150 Ω (180 Ω actual)	EIA Rated at 150 Ω (170 Ω actual)	EIA Rated at 150 (170 actual, MX405/410/415 ) (180 actual, MX412/418 )	EIA Rated at 150 Ω (180 Ω actual)
<b>Sensitivity (at 1 kHz, open circuit voltage)</b>	MX183: –27.5 dB V/Pa (42.2 mV) MX184: –33.5 dB V/Pa (21.1 mV) MX185: –35.0 dB V/Pa (17.8 mV) MX150: –39.0 dB V/Pa MX153: –41.0 dB V/Pa All settings –12 dB at 0 gain 1 Pascal = 94 dB SPL	Cardioid: –35.0 dB V/Pa (17.8 mV) Supercardioid: –33.5 dB V/Pa (21.1 mV) Omnidirectional: –27.5 dB V/Pa (42.2 mV) All values –12 dB at 0 gain 1 Pascal = 94 dB SPL	MX391 Cardioid: –29.6 dB V/Pa (33.5 mV) MX391 Supercardioid: –28.3 dB V/Pa (38.5 mV) MX391 Omnidirectional: –21.5 dB V/Pa (81.4 mV) MX392/393 Cardioid: –27.5 dB V/Pa (42.2 mV) MX392/393 Supercardioid: –26.5 dB V/Pa (47.3 mV) MX392/393 Omnidirectional: –22.0 dB V/Pa (79.4 mV) 1 Pascal = 94 dB SPL	MX395 Cardioid: –34 dB V/Pa (20 mV) MX395 Omnidirectional: –29 dB V/Pa (35.5 mV) MX395 Bidirectional: –35 dB V/Pa (17.8 mV) MX396: –35 dB V/Pa (18 mV) 1 Pascal = 94 dB SPL	Cardioid: –35 dB V/Pa (17.8 mV) Supercardioid: –33.5 dB V/Pa (21.1 mV ) Omnidirectional: –27.5 dB V/Pa (42.2 mV ) 1 Pascal=94 dB SPL	–33 dB V/Pa (33 mV) 1 Pascal=94 dB SPL
<b>Maximum SPL (1 kHz at 1% THD, 1 k load)</b>	MX183: 132.8 dB MX184: 138.8 dB MX185: 140.3 dB MX150: 129.5 dB MX153: 107 dB All settings +6 dB at 0 gain	Cardioid: 124.2 dB Supercardioid: 122.7 dB Omnidirectional: 116.7 dB	Cardioid: 118.8 dB Supercardioid: 117.5 dB Omnidirectional: 110.7 dB	MX395 Cardioid: 120 dB MX395 Omnidirectional: 115 dB MX395 Bidirectional: 121 dB MX396: 122 dB	MX405/410/415: Cardioid with MX400SMP: 121.1 dB Cardioid with MX400DP: 122 dB Supercardioid: with MX400SMP: 119.7 dB Supercardioid: with MX400DP: 120.5 dB MX412/418: Cardioid: 124.2 dB Supercardioid: 122.7 dB Omnidirectional: 116.7 dB	118.8 dB  <i>For complete specifications on the MX690 and MX890 wireless transmitters, please visit <a href="http://www.shure.com">www.shure.com</a>.</i>
<b>Equivalent Output Noise (A-weighted)</b>	MX183: 23.7 dB SPL MX184: 29.7 dB SPL MX185: 31.2 dB SPL MX150: 31.0 dB SPL MX153: 24.9 dB SPL	Cardioid: 28.0 dB SPL Supercardioid: 26.5 dB SPL Omnidirectional: 20.5 dB SPL	Cardioid: 22.6 dB SPL Supercardioid: 21.3 dB SPL Omnidirectional: 14.5 dB SPL	MX395 Cardioid: 29 dB SPL MX395 Omnidirectional: 23 dB SPL MX395 Bidirectional: 27 dB SPL MX396: 30 dB SPL	Cardioid: 28 dB SPL Supercardioid: 26.5 dB SP L Omnidirectional: 20.5 dB SPL	22.6 dB SPL
<b>Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz)</b>	MX183: 70.3 dB MX184: 64.3 dB MX185: 62.8 dB MX150: 57.5 dB MX153: 60.0 dB	Cardioid: 66.0 dB Supercardioid: 67.5 dB Omnidirectional: 73.5 dB	Cardioid: 71.4 dB Supercardioid: 72.7 dB Omnidirectional: 79.5 dB	MX395 Cardioid: 65 dB MX395 Omnidirectional: 72 dB MX395 Bidirectional: 67 dB MX396: 64 dB	Cardioid: 66 dB Supercardioid: 67.5 dB Omnidirectional: 73.5 dB	71.4 dB
<b>Dynamic Range (1 k load at 1 kHz)</b>	MX185/184/183: 109.1 dB MX150: 92.5 dB MX153: 73.0 dB 100 dB at 0 gain	96.2 dB (100 dB at 0 gain)	96.2 dB	MX395 Cardioid: 91 dB MX395 Omnidirectional: 92 dB MX395 Bidirectional: 95 dB MX396: 92 dB	MX405/410/415: Cardioid with MX400SMP: 93.1 dB Cardioid with MX400DP: 94 dB Supercardioid with MX400SMP: 93.2 dB Supercardioid with MX400DP: 94 dB MX412/418: 96.2 dB 100 dB at 0 gain	96.2 dB
<b>Power Requirements</b>	11–52 Vdc phantom, 2.0 mA or 9V battery 0.8mA	11–52 Vdc phantom, 2.0 mA	11–52 Vdc phantom, 2.0 mA	MX395: 11–52 Vdc phantom, 2.0 mA MX395-LED: 48–52 Vdc phantom, 8.0 mA MX396: MX396/C-DUAL: 48–52 Vdc phantom, 10.0 mA MX396/C-TRI: 48–52 Vdc phantom, 12.0 mA	MX405/410/415: 48–52 Vdc phantom, 8.0 mA MX412/418: 11–52 Vdc phantom, 8.0 mA	3V (2 AA alkaline or rechargeable batteries)

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