SECTOR-PRO
VER. OIR. SENTIR...

EQUIPAMIENTO TECNICO

SALAS PEQUEÑAS
1.- VIDEO PROYECTORES

EPSON 12 K EB-L1505UH. (12.000 lumens)***

*** MEJORA
Un potente proyector láser 3LCD WUXGA de 12.000 lúmenes que ofrece un brillo y una nitidez de imagen excepcionales, un rendimiento de larga duración y un mantenimiento reducido.

El proyector láser EB-L1505UH ofrece un potente rendimiento WUXGA de 12.000 lúmenes con colores brillantes y vivos, es perfecto para usarse en salas grandes y auditórios, y una vez instalado, no tendrás que preocuparte de nada más. Dado que su instalación se adapta a cualquier situación y no requiere un mantenimiento alto, este proyector mejorado con tecnología 4K constituye una solución perfecta para los espacios que exijan un rendimiento y una resistencia superiores.

**Imágenes con precisión láser**
Asegúrate de que tus presentaciones, imágenes y videos causan un gran impacto con la proyección vivida y nítida de este proyector láser 3LCD. Esté diseñado para usarse en salas de gran tamaño, las imágenes de alta resolución WUXGA que proyecta son vivas y brillantes, incluso a plena luz del día, mientras que la tecnología de rueda de fósforo inorgánica proporciona una luz superior y resistencia al calor para ofrecer una excelente fiabilidad que dura hasta 83.000 horas.

**Mejora 4K**
Para una experiencia de visualización de un nivel superior, el proyector cuenta con mejora de 4K que confiere una nitidez y una claridad excepcionales a las imágenes, y garantiza que el texto de las presentaciones se lea a la perfección.

**Colocación flexible**
Gracias a una nueva gama de lentes motorizadas, que incluyen opcionalmente lentes de distancia ultracorta (UST por sus siglas en inglés), el proyector se beneficia de una auténtica flexibilidad de instalación de 360°, lo que permite su colocación casi en cualquier lugar sin que se pierda brillo ni se distorsione la imagen. El proyector también dispone de una cámara incorporada para garantizar la precisión en la calibración y la captura de imágenes con fines diagnósticos (puede desactivarse por completo para evitar el acceso remoto).

**Nuevo software versátil**
Todos los modelos de la serie EB-L1000 pueden aprovechar las ventajas del software Epson Professional Projector Tool gratuito a partir de diciembre de 2017. Permite configurar instalaciones de varios proyectores de inmediato, con facilidad y rapidez, así como utilizar técnicas avanzadas como la asignación de proyección y la combinación de bordes.
**ESPECIFICACIONES DEL PRODUCTO**

**TECNOLÓGICA**
- Sistema de proyección: Tecnología 3LCD
- Pantalla LCD: 1,03 pulgada con C2 Fine

**IMAGEN**
- Emissions de luz en color: 12,000 Lumen - 8,400 Lumen (económico) de conformidad con IDMS2012
- Emissions de luz branca: 12,000 Lumen - 8,400 Lumen (económico) de conformidad con ISO 21118:2012
- Emissions de luz en color vertical: 12,000 lm
- Emissions de luz branca vertical: 12,000 lm
- Resolución: WXGA, 1920 x 1200, 16:10
- Relación de contraste: 2,000:1
- Native Contrast: 1,000:1
- Control de Keystone: Manual vertical ± 45°, Manual horizontal ± 30°
- Reproducción del color: Hasta 1,070 millones de colores

**ASPECTO**
- Relación proyección: 1,67 - 2,56:1
- Zoom: Motorizado, Factor: 1 - 1,6
- Lens position memory: 10 posiciones
- Tamaño de la imagen: 60 pulgadas - 500 pulgadas
- Distancia proyección objetivo: 2 m - 11,2 m
- Distancia proyección gran angular: 3,3 m - 27,9 m
- Distancia de proyección gran angular/teleobjetivo: 1,99 m - 27,7 m
- Lente de proyección número F: 1,8 - 2,5
- Distancia focal: 36 mm - 57,5 mm
- Foco: Motorizado

**CONEXIVIDAD**
- Interfaces: Entrada de audio Stereo mini-jack (3x), Salida de audio Stereo mini-jack, HD-BaseT, Entrad BNC, Entrada HDMI, Entrada DVI, Salida VGA, Entrada VGA, Interfaz Ethernet (100 Base-TX/10 Base-T), RS-232C, USB 2.0 Tipo B (Sólo Servicio), HD-SDI, LAN inalámbrica b/g/n (2,4 GHz) (opcional)
- Aplicación Epson iProjection: Ad Hoc / Infraestructura

**FUNCIONES AVANZADAS**
- Seguridad: Protección Kensington, Barra de seguridad, Bloqueo de unidad LAN inalámbrica, Seguridad de LAN inalámbrica, Protección por contraseña
- Características: 4K mejora, Negro profundo, Calibración automática, Logo de usuario personalizable, Interpolación de fotogramas, Cámara integrada para la calibración y la captura de imágenes, Memoria de posición de la lente
- Modos de color: Cine, Dinámico, Presentación, DICOM SM, Multi Projection, BT709

**GENERAL**
- Consumo de energía: 506 vatios, 567 vatios (económico), 0,3 vatios (Standby, On mode power consumption as defined in JBMS-84 833 vatios
- Dimensiones del producto: 566 x 492 x 211 mm (ancho x profundidad x altura)

**OTROS**
- Garantía: 60 meses Reparación en taller o 20.000 h

**INFORMACIÓN LOGÍSTICA**
- Código SKU: V11H910140
- Código de barras: 8715946647005
- País de origen: China

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**ACCESORIOS OPCIONALES**
- **3D Polarizer - ELPLP01**
- **Color Filter - ELPLF01**
- **Color Wheel - ELPLW01**
- **Air Filter - ELPAF01**
- **LCD Projector Lamp - ELPLP01**
- **Remote Control - ER100**

**LENTES OPCIONALES**
- **Lens - ELPLM10 - Long throw - G7000L1000 series**
- **Lens - ELPLM11 - Mid throw 3 - G7000L1000 series**
- **Lens - ELPLM15 - Mid 1/4 throw L1500L1000 Series**
- **Lens - ELPLM33 - G7000 & L1000 Series ST off axis**
- **Lens - ELPLW05 - G7000 & L1000 Series wide zoom 1**
- **Lens - ELPLW06 - L1500U/1500U wide zoom 2**
- **Lens - ELPLX22 - UST Lens L1500X1700 Series**

**INCLUYE**
- Mando a distancia incl. pilas
- Guía rápida
- Cable de alimentación y señal (3 m)
- Cable VGA
- Cubierta de cable
- Manual en CD

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Epson®

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La información sobre los productos puede estar sujeta a modificación en función de las actualizaciones en sus especificaciones.
2. MONITORES DE VIDEO

- SANSUNG PLASMAS KV6300FLAT SMART 4K VHD TV 60"
SAMSUNG
J6300F Flat Smart Full HD TV

PLASMAS 40", 43", 55" y 60"
3. MONITOR DE AUDIO

- LACOSUTICS XT 115 HIQ
- TRUBOSOUND TMW 112
115XT HiQ
COAXIAL STAGE MONITOR

The 115XT HiQ is the high-end model within the L-ACOUSTICS® XT coaxial series, designed for stage monitor and distributed FOH applications. It operates as an active 2-way enclosure, over a frequency bandwidth from 50 Hz to 20 kHz which can be lowered to 32 Hz with the addition of the SB18 subwoofer.

The 115XT HiQ enclosure contains a 3" diaphragm compression driver loaded onto a constant directivity conical waveguide united in a coaxial configuration with a 15" low frequency transducer. Integrated into a compact low profile bass-reflex tuned enclosure this coaxial transducer arrangement produces a 50° axi-symmetric directivity output along with a smooth tonal response free of any secondary lobes over the entire frequency range, resulting in exceptional immunity to feedback especially in monitoring situations.

Made of high-grade Baltic birch plywood, the wedge-shaped cabinet design makes the 115XT HiQ perfectly suited to short or long throw monitoring use with two fixed angle settings of 30° and 60° from vertical. The 115XT HiQ can also be pole-mounted using the integrated socket or flown using the complementary ETR15 bracket or XTLIFTBAR accessory.

The control and amplification of the 115XT HiQ is managed by the L-ACOUSTICS® LAB platform. The active DSP filtering encompasses advanced crossover functions, system EQ, HF and LF transducer time alignment, and dual protection of the transducers (PEAK and RMS). The L-ACOUSTICS® LAB amplified controller offers the following drive modes:

• "FULL RANGE" mode for 115XT HiQ standalone use at nominal bandwidth ([HiQ_FR], [HiQ_MO] and [HiQ_MO]) presets)

• "HIGH-PASS" mode with 100 Hz high-pass filter to possibly associate the complementary SB18 subwoofer ([HiQ_FR_100], [HiQ_MO_100] and [HiQ_MO_100] presets)

For each mode a distinction is drawn between [FRONT], [FILL] and [MONITOR] presets as they respectively match front of house, distributed applications and half-space loading operating conditions.

The performances of the 115XT HiQ enclosure depend upon the choice of preset and physical system configuration.

<table>
<thead>
<tr>
<th>Usable bandwidth (-10dB)</th>
<th>50 Hz - 20 kHz ([HiQ_FR] preset)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal directivity (-6dB)</td>
<td>50° Axi-symmetric</td>
</tr>
<tr>
<td>Maximum SPL1</td>
<td>139.5 dB ([HiQ_MO] preset)</td>
</tr>
<tr>
<td></td>
<td>136.5 dB ([HiQ_FR] preset)</td>
</tr>
<tr>
<td>RMS handling capacity</td>
<td>LF: 450 W</td>
</tr>
<tr>
<td>Components</td>
<td>LF: 1 x 15&quot; neodymium transducer</td>
</tr>
<tr>
<td></td>
<td>HF: 1 x 3&quot; diaphragm compression driver</td>
</tr>
<tr>
<td></td>
<td>Nominal impedance: 2 x 8 ohms</td>
</tr>
<tr>
<td>Physical data</td>
<td>H x W x D: 365 x 580 x 440 mm - 14.4 x 22.8 x 17.3 in</td>
</tr>
<tr>
<td></td>
<td>Wedge angle: 30° or 60° from vertical</td>
</tr>
<tr>
<td></td>
<td>Weight (net): 28.5 kg - 62.8 lbs</td>
</tr>
<tr>
<td></td>
<td>Connectors: 2 x 4-point Speakon®</td>
</tr>
<tr>
<td></td>
<td>Material: 18, 24 and 30 mm Baltic birch plywood</td>
</tr>
<tr>
<td></td>
<td>Finish: Grey-brown RAL 9019®</td>
</tr>
<tr>
<td></td>
<td>Front: polyester-powder coated steel grill, acoustically transparent Airnet® cloth</td>
</tr>
<tr>
<td></td>
<td>Rigging: integrated handles and pole mount socket, optional ETR15 bracket and XTLIFTBAR accessory</td>
</tr>
</tbody>
</table>

1 Peak level measured at 1m under half-space (MO) or free field (FI) conditions using 10 dB crest factor peak noise with specified preset and corresponding EQ settings.

WWW.L-ACOUSTICS.COM
TMW-112 passive / bi-amped floor monitor

Features
- Unique 12° coaxial driver
- Neodymium magnet
- Low profile enclosure
- 35° wedge angle
- Small footprint
- Switchable passive/active
- NL4 connectors
- Pole mount socket
- TourTough finish

Applications
- Vocal monitoring
- Drum fills
- Stage monitoring

The TMW-112 is a compact switchable passive / biamped floor monitor consisting of a coaxial 12° HF/LF combination driver in a reflex-loaded enclosure. This co-axial drive unit is matched with an exponential horn flare for improved acoustic loading and controlled coverage. Both HF and LF coils utilise the same neodymium magnet assembly, which gives better efficiency and reduced weight. This allows the creation of a low profile monitor wedge with a minimal footprint which, combined with a 35° projection angle, is ideal as a vocal monitor on smaller stages where space is limited. The lightweight birch plywood cabinet is equipped with two flush recessed handles, and Speakon NL4 connectors are provided at each side for tidy inter-connects. The cabinet is finished in a durable textured TourTough black polyurethane coating and includes a curved profile perforated steel grille backed with reticulated foam and supported by a steel reinforcing strip positioned across the front of the drive unit. A pole mount socket is provided for use on speaker poles or tripods.

Frequency Response
**TMW-112** passive / bi-amped floor monitor

<table>
<thead>
<tr>
<th><strong>DIMENSIONS (HxWxD)</strong></th>
<th>314mm x 450mm x 538mm (12.4” x 17.7” x 21.1”)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NET WEIGHT</strong></td>
<td>19kg (41.8lbs)</td>
</tr>
<tr>
<td><strong>COMPONENTS</strong></td>
<td>1 x coaxial 12” (305mm) LF driver / HF compression driver</td>
</tr>
<tr>
<td><strong>FREQUENCY RESPONSE</strong></td>
<td>75Hz – 18kHz ±3dB, 60Hz – 20kHz ±10dB</td>
</tr>
<tr>
<td><strong>Nominal Dispersion</strong></td>
<td>60°H x 40°V @ -6dB points</td>
</tr>
<tr>
<td><strong>POWER HANDLING</strong></td>
<td>LF: 350 watts r.m.s., 700 watts program</td>
</tr>
<tr>
<td></td>
<td>HF: 80 watts r.m.s., 160 watts program</td>
</tr>
<tr>
<td></td>
<td>Passive: 500 watts r.m.s., 1000 watts program</td>
</tr>
<tr>
<td><strong>SENSITIVITY</strong></td>
<td>95dB 1 watt @ 1 metre</td>
</tr>
<tr>
<td><strong>IMPEDANCE</strong></td>
<td>LF: 8 ohms, HF: 8 ohms, passive: 8 ohms</td>
</tr>
<tr>
<td><strong>MAXIMUM SPL</strong></td>
<td>122dB continuous, 128dB peak</td>
</tr>
<tr>
<td><strong>CROSSOVER</strong></td>
<td>Passive crossover network at 1kHz, switchable active/passive</td>
</tr>
<tr>
<td><strong>CONSTRUCTION</strong></td>
<td>15mm (5/8”) birch plywood, finished in black textured polyurethane. Two recessed carrying handles Pole mount socket</td>
</tr>
<tr>
<td><strong>GRILLE</strong></td>
<td>Black powder coated perforated steel backed with foam</td>
</tr>
<tr>
<td><strong>CONNECTORS</strong></td>
<td>2 x Spekron NL4 wired: pin 1+: LF positive, pin1-: LF negative, pin2+: HF positive, pin 2-: HF negative</td>
</tr>
<tr>
<td><strong>SPARES AND ACCESSORIES</strong></td>
<td>LS-1227 12” (305mm) coaxial HF/LF loudspeaker</td>
</tr>
<tr>
<td></td>
<td>RD-1227/RD-1533 Replacement diaphragm</td>
</tr>
<tr>
<td></td>
<td>MG-TMW112 Metal grille</td>
</tr>
<tr>
<td><strong>MORE INFO</strong></td>
<td>More information can be found on our website: <a href="http://www.turbosound.com">www.turbosound.com</a></td>
</tr>
</tbody>
</table>

**Limited Warranty**

Every Turbosound loudspeaker product is warranted to the original end-user purchaser and all subsequent owners for a period of two (2) years for loudspeaker products, or one (1) year for electronics products, from the original date of purchase. Warranty coverage includes defects in materials and workmanship. It does not include:

- damage caused by accident, misuse, abuse, neglect or modification by any other person other than an authorised Turbosound representative,
- damage caused by overdriving, use with unsuitable amplifiers or amplifier failure,
- damage caused by failure to operate the product in accordance with the instructions contained in the user's manual,
- damage occurring during shipment in transit,
- claims based upon any misrepresentations by the seller,
- products which do not have the original components as specified in the product engineering information,
- products on which the serial number has been removed or defaced.

Should any fault develop with a component of your Turbosound system, please return the product, freight pre-paid, in its original packing carton, along with proof of purchase such as the original bill of sale, and a description of the suspected fault, to your local authorised Turbosound representative. The product serial number must be quoted in all correspondence relating to the claim. Insurance is recommended as Turbosound or its representatives are not liable for loss or damage in transit.
4. MICROFONOS DE ATRIL

- SHURE MX SERIES FLEXO
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
- 12 cm (5"), 25 cm (10"), 30 cm (12"), 38 cm (15") and 45 cm (18") models fit a wide variety of applications from the podium to the conference table
- Interchangeable condenser cartridges with superior audio quality

Microflex Boundary Microphones
- Multi-element, low-profile, or wireless microphone styles available
- Extremely versatile range of placement options for easy configuration and installation

Microflex Overhead Microphones
- Compact and adjustable 10 cm (4") gooseneck
- Interchangeable condenser cartridges for accurate sound reproduction in any setting

Microflex Lavalier and Earset Microphones
- For applications requiring low-profile discreet placement
- Use in wired or wireless applications
### Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Condenser (electret bias)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response</td>
<td>50 Hz – 17 kHz</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>MX405/C, MX410/C, MX415/C: Cardioid&lt;br&gt;MX405/S, MX410/S, MX415/S: Supercardioid</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>EIA rated at 150 Ω (120 Ω actual)</td>
</tr>
<tr>
<td>Configuration</td>
<td>Active balanced</td>
</tr>
<tr>
<td>Sensitivity, 1 kHz, open circuit voltage; 1 Pascal = 94 dB SPL</td>
<td>Cardioid: -35 dBV/Pa (18 mV)&lt;br&gt;Supercardioid: -34 dBV/Pa (21 mV)</td>
</tr>
<tr>
<td>Maximum SPL at 1% THD, 1 kΩ load</td>
<td>Cardioid: 121 dB&lt;br&gt;Supercardioid: 120 dB</td>
</tr>
<tr>
<td>Equivalent Output Noise Level</td>
<td>Cardioid: 28 dB SPL&lt;br&gt;Supercardioid: 27 dB SPL</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>Cardioid: 66 dB&lt;br&gt;Supercardioid: 67 dB</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>93 dB</td>
</tr>
<tr>
<td>Common Mode Rejection, 10 Hz to 100 kHz</td>
<td>45 dB minimum</td>
</tr>
<tr>
<td>Preamp Output Level</td>
<td>-8 dBV (0.4 V)</td>
</tr>
<tr>
<td>Polarity</td>
<td>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.</td>
</tr>
<tr>
<td>Weight</td>
<td>MX405: 54 g&lt;br&gt;MX410: 58 g&lt;br&gt;MX415S: 70 g&lt;br&gt;MX4000P: 516 g&lt;br&gt;MX4000SMP (w/ foil): 125 g</td>
</tr>
<tr>
<td>Logic: Connections</td>
<td>LED IN: Active low (≤ 0.5 V), TTL compatible. Absolute maximum voltage: -0.7 V to 5.0 V. LOGIC OUT: Active low (≤ 0.3 V), sinks up to 20 mA. TTL compatible. Absolute maximum voltage: -0.7 V to 5.0 V (up to 5.0 V through 3 kΩ).</td>
</tr>
<tr>
<td>Mute Switch Attenuation</td>
<td>-50 dB minimum</td>
</tr>
<tr>
<td>Cable</td>
<td>MX4000P: 6 m attached cable with shielded audio pair terminated at a 3-pin male XLR and three unterminated conductors for logic control</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>Operating temperature: -18 to 77 °C&lt;br&gt;Storage temperature: -20 to 74 °C&lt;br&gt;Relative humidity: 0 – 95%</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>48 – 52 Vdc phantom, 8.0 mA</td>
</tr>
</tbody>
</table>

### 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**
- 127 mm (5-inch) gooseneck, bi-color status indicator, includes surface mount preamp

**MX405R/C, MX405R/S**
- 127 mm (5-inch) gooseneck, light ring, includes surface mount preamp

**MX410/C, MX410/S**
- 254 mm (10-inch) gooseneck, bi-color status indicator, includes surface mount preamp

**MX410R/C, MX410R/S**
- 254 mm (10-inch) gooseneck, light ring, includes surface mount preamp

**MX415/C, MX415/S**
- 381 mm (15-inch) gooseneck, bi-color status indicator, includes surface mount preamp

**MX415R/C, MX415R/S**
- 381 mm (15-inch) gooseneck, light ring, includes surface mount preamp

**MX405LP/C, MX405LP/S**
- 127 mm (5-inch) gooseneck, bi-color status indicator, less preamp

**MX405RLP/C, MX405RLP/S**
- 127 mm (5-inch) gooseneck, light ring, less preamp

**MX410LP/C, MX410LP/S**
- 254 mm (10-inch) gooseneck, bi-color status indicator, less preamp

**MX410RLP/C, MX410RLP/S**
- 254 mm (10-inch) gooseneck, light ring, less preamp

**MX415LP/C, MX415LP/S**
- 381 mm (15-inch) gooseneck, bi-color status indicator, less preamp

**MX415RLP/C, MX415RLP/S**
- 381 mm (15-inch) gooseneck, light ring, less preamp

www.shure.de
MX405, MX410 and MX415 Miniature Gooseneck Microphones

Optional Accessories and Replacement Parts

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX400SMP Surface mount preamp</td>
<td>R185B</td>
<td>Black cardioid cartridge for all Microflex models</td>
</tr>
<tr>
<td>MX400DP Wired desktop base. Includes 6.1 m attached cable</td>
<td>R184B</td>
<td>Black supercardioid cartridge for all Microflex models</td>
</tr>
<tr>
<td>MX890 Wireless desktop base, compatible with SLX Wireless Systems</td>
<td>R183B</td>
<td>Black Omnidirectional cartridge for all Microflex models</td>
</tr>
<tr>
<td></td>
<td>A412MWS</td>
<td>Metal locking windscreen</td>
</tr>
<tr>
<td></td>
<td>95A2487</td>
<td>Tapered windscreen</td>
</tr>
</tbody>
</table>

Furnished Accessories

<table>
<thead>
<tr>
<th>Models with included Preamp</th>
<th>All Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX400SMP Surface mount preamp</td>
<td>RK513WS Snap-fit foam windscreen (4 pcs.)</td>
</tr>
<tr>
<td>6SA405 Rubber isolation rings</td>
<td></td>
</tr>
<tr>
<td>6SA2190 Wing nut</td>
<td></td>
</tr>
<tr>
<td>95A2529 5-pin XLR-F</td>
<td></td>
</tr>
<tr>
<td>6SA2166 Cap</td>
<td></td>
</tr>
</tbody>
</table>

Architectural Specifications

MX405C - The microphone shall be an electrocondenser 127 mm gooseneck microphone (5") with cardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 18 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX405S - The microphone shall be an electrocondenser 127 mm gooseneck microphone (5") with supercardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX405SN - The microphone shall be an electrocondenser 127 mm gooseneck microphone (5") with no included cartridge, black finish, and logic controlled, upper red light ring status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410C - The microphone shall be an electrocondenser 264 mm gooseneck microphone (10") with cardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 18 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410S - The microphone shall be an electrocondenser 254 mm gooseneck microphone (10") with supercardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410SN - The microphone shall be an electrocondenser 254 mm gooseneck microphone (10") with no included cartridge, black finish, and logic controlled, upper red light ring status indicator. The microphone shall be mounted in the included MX400SMP preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

www.shure.de
MX405, MX410 and MX415 Miniature Gooseneck Microphones

MX415C - The microphone shall be an electret condenser 381 mm gooseneck microphone (15") with cardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP fream. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 18 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX415S - The microphone shall be an electret condenser 381 mm gooseneck microphone (15") with supercardioid polar pattern, black finish, and logic controlled bi-color status indicator. The microphone shall be mounted in the included MX400SMP fream. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 18 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX415RFC - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with cardioid polar pattern, two bendable sections, black finish, and logic controlled bi-color status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX415RFSC - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with supercardioid polar pattern, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410RFC - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with cardioid polar pattern, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410RFSC - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with supercardioid polar pattern, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410LFSC - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with no included cartridge, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410LFSPC - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with no included cartridge, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410LFC - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with no included cartridge, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410LFSP - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with no included cartridge, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410LSPC - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with no included cartridge, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX410LFSP - The microphone shall be an electret condenser 254 mm gooseneck microphone (10") with no included cartridge, two bendable sections, black finish, and logic controlled upper red light ring status indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

www.shure.de
MX412 and 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 lengths 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

| Type | Condenser (electret bias) |
| Frequency Response | 50 Hz – 17 kHz |
| Polar Pattern | MX412/C, MX418/C: Cardioid  
MX412/5, MX418/5: Supercardioid  
Omnidirectional cartridge available separately |
| Output Impedance | EIA rated at 150 Ω (170 Ω actual) |
| Sensitivity | Cardioid: –35 dBV/Pa (17.8 mV)  
Supercardioid: –33.5 dBV/Pa (21.2 mV)  
Omnidirectional: –27.5 (42.2 mV) |
| Maximum SPL | Cardioid: 124.2 dB  
Supercardioid: 122.7 dB  
Omnidirectional: 116.7 dB |
| Equivalent Output Noise | Cardioid: 28 dB SPL  
Supercardioid: 26.5 dB SPL  
Omnidirectional: 20.5 dB SPL |
| Signal-to-Noise Ratio | Cardioid: 65 dB  
Supercardioid: 67.5 dB  
Omnidirectional: 73.5 dB |
| Dynamic Range | 96.2 dB  
100 dB at 0 gain (internal modification) |
| Common Mode Rejection | 45 dB minimum (10 Hz – 100 kHz) |
| Preampifier Output Clipping Level | –6 dBV (0.5 V) |
| 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 attached custom cable contains a shielded audio pair and three unshielded conductors for logic control.  
Overall diameter = 4 mm |
| Environmental Conditions | Operating temperature range: -18° – 57° C  
Relative humidity: 0 – 95% |
| Power Requirements | 11 – 52 Vdc phantom, 8.0 mA |

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**: 305 mm (12 inch) gooseneck, attached XLR preamp, shock mount, flange mount, snap-fit foam windscreen
- **MX418/C, MX418/S, MX418/N**: 487 mm (18 inch) gooseneck, attached XLR preamp, shock mount, flange mount, snap-fit foam windscreen
- **MX412/5/C, MX412/5/S, MX412/5/N**: 305 mm (12 inch) gooseneck, attached XLR preamp, Shock Mount, Flange mount, snap-fit foam windscreen, mute switch, LED indicator
- **MX418/5/C, MX418/5/S, MX418/5/N**: 487 mm (18 inch) gooseneck, attached XLR preamp, shock mount, flange mount, snap-fit foam windscreen, mute switch, LED indicator
- **MX412/SEC, MX412/SE/S, MX412/SE/N**: 305 mm (12 inch) gooseneck, in-line preamp, shock mount, flange mount, 3m side-exit (or bottom-exit) cable, snap-fit foam windscreen
- **MX418/SEC, MX418/SE/S, MX418/SE/N**: 487 mm (18 inch) gooseneck, in-line preamp, shock mount, flange mount, 3m side-exit (or bottom-exit) cable, snap-fit foam windscreen
- **MX412/DC, MX412/DS, MX412/DN**: 305 mm (12 inch) gooseneck, desktop base with 3 m cable, logic functions, programmable switch and LED indicator, snap-fit foam windscreen
- **MX418/DC, MX418/DS, MX418/DN**: 487 mm (18 inch) gooseneck, desktop base with 3 m cable, logic functions, programmable switch and LED indicator, snap-fit foam windscreen

www.shure.de

*for detailed dimensions please reference MX412/418 user guides*
# MX412 and MX418 Standard Gooseneck Microphones

## Furnished Accessories

<table>
<thead>
<tr>
<th>MX412, MX418, MX412S, MX418S Models</th>
<th>MX412SE, MX418SE Models</th>
<th>MX412D, MX418D Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>65B8264 Flange</td>
<td>A12C Flange and nut</td>
<td>RK412WS Snap-fit foam windscreen (1 furnished, 4 in replacement pack)</td>
</tr>
<tr>
<td>65B8265 Retainer</td>
<td>80A476 Clamp</td>
<td></td>
</tr>
<tr>
<td>80A439 Isolation ring</td>
<td>A400SM Shock mount</td>
<td></td>
</tr>
<tr>
<td>RK412WS Snap-fit foam windscreen (1 furnished, 4 in replacement pack)</td>
<td>RK412WS Snap-fit foam windscreen (1 furnished, 4 in replacement pack)</td>
<td></td>
</tr>
<tr>
<td>A4005M Shock mount</td>
<td>3181762A Shock mount adapter</td>
<td></td>
</tr>
<tr>
<td>80A467 Hex wrench #4</td>
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</tr>
</tbody>
</table>

## Optional Accessories and Replacement Parts

<table>
<thead>
<tr>
<th>A09WS Foam ball windscreen</th>
<th>R183B Black omnidirectional cartridge for all Microflex models</th>
<th>A412MWS Metal locking windscreen</th>
</tr>
</thead>
<tbody>
<tr>
<td>RK100PK Replacement in-line preamplifier (SE models)</td>
<td>R184B Black supercardioid cartridge for all Microflex models</td>
<td>A412B Desktop base</td>
</tr>
<tr>
<td>C130 Custom logic cable (specify length)</td>
<td>R185B Black cardioid cartridge for all Microflex models</td>
<td>A57F Stand adapter</td>
</tr>
</tbody>
</table>

![Cardioid](Cardioid.png) ![Omnidirectional](Omnidirectional.png) ![Supercardioid](Supercardioid.png)

www.shure.de
**MX412 and MX416 Standard Gooseneck Microphones**

### Architectural Specifications

**MX412C** - The microphone shall be an electret condenser 30.5 mm gooseneck microphone (12") with cardioid polar pattern, interchangeable cartridges integrated XLR preamp, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX412S** - The microphone shall be an electret condenser 30.5 mm gooseneck microphone (12") with supercardioid polar pattern, integrated XLR preamp, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX412N** - The microphone shall be an electret condenser 30.5 mm gooseneck microphone (12") with no included cartridge, integrated XLR preamp, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX412BC** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with cardioid polar pattern, integrated XLR preamp, black finish, mute switch, and LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX412SC** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with supercardioid polar pattern, black finish, mute switch, and LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.0 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX412SN** - The microphone shall be an electret condenser 30.5 mm gooseneck microphone (12") with no included cartridge, integrated XLR preamp, and black finish. The microphone shall be connected to a 4-pin miniature (T4M#) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX418SE/C** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with cardioid polar pattern, black finish, and 10") (3m) side-e (or bottom-e) cable that terminates to a 4-pin miniature (T4M#) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX418SE/S** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with supercardioid polar pattern, black finish, and 10") (3m) side-e (or bottom-e) cable that terminates to a 4-pin miniature (T4M#) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.0 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

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**MX418SDN** - The microphone shall be an electret condenser 30.5 mm gooseneck microphone (12") with no included cartridge, integrated XLR preamp, and black finish. The microphone shall be connected to a 4-pin miniature (T4M#) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX418SDC** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with supercardioid polar pattern, black finish, and 3 m side-e (or bottom-e) cable that terminates to a 4-pin miniature (T4M#) connector. The microphone shall be connected to the included in-line preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX418SDS** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with supercardioid polar pattern, black finish, and 3 m side-e (or bottom-e) cable that terminates to a 4-pin miniature (T4M#) connector. The microphone shall be connected to the included in-line preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

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**MX418SSE/S** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with supercardioid polar pattern, black finish, and 10") (3m) side-e (or bottom-e) cable that terminates to a 4-pin miniature (T4M#) connector. The microphone shall be connected to the included in-line preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

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**MX418SDN** - The microphone shall be an electret condenser 30.5 mm gooseneck microphone (12") with no included cartridge, integrated XLR preamp, and black finish. The microphone shall be connected to a 4-pin miniature (T4M#) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX418SDC** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with supercardioid polar pattern, black finish, and 3 m side-e (or bottom-e) cable that terminates to a 4-pin miniature (T4M#) connector. The microphone shall be connected to the included in-line preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX418SDS** - The microphone shall be an electret condenser 45.7 mm gooseneck microphone (18") with supercardioid polar pattern, black finish, and 3 m side-e (or bottom-e) cable that terminates to a 4-pin miniature (T4M#) connector. The microphone shall be connected to the included in-line preamp. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21 mV/ Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

**MX418SDN** - The microphone shall be an electret condenser 30.5 mm gooseneck microphone (12") with no included cartridge, integrated XLR preamp, and black finish. The microphone shall be connected to a 4-pin miniature (T4M#) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.
MX396 Multi-Element Boundary Microphones

Microflex Multi-Element Boundary Microphones deliver 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.

Specifications

- **Type**: Condenser (electret bias)
- **Frequency Response**: 50 Hz – 17 kHz
- **Output Impedance**: 150 Ω (170 Ω actual)
- **Output Configuration**: Active balanced
- **Sensitivity**
  - at 1 kHz, open circuit voltage: 1 Pa = 94 dB SPL
  - -35 dBV/ Pa (18 mV)
- **Maximum SPL**
  - 1 kHz at 1% THD, 1 kΩ load: 122 dB
- **Equivalent Output Noise**
  - A-weighted: 28 dB SPL
- **Signal-to-Noise Ratio**
  - referenced at 94 dB SPL at 1 kHz: 65 dB
- **Dynamic Range**
  - 1 kΩ load at 1 kHz: 94 dB
- **Common Mode Rejection**
  - 10 Hz to 100 kHz: 45 dB minimum
- **Preamplifier Output Clipping Level**
  - 1% THD: -6 dBV (0.5 V)
- **Weight**
  - Net: 587 g
  - Package: 816 g
- **Logic Connections**
  - LED IN: Active low (≤1 V), sinks up to 20 mA, TTL compatible.
  - LOGIC OUT: Active low (≤0.8V), sinks up to 20 mA, TTL compatible.
- **Mute Switch Attenuation**
  - -50 dB minimum
- **Cable**
  - 6 m attached un terminated cable with three shielded audio pairs and three shielded conductors for LED control.
- **Environmental Conditions**
  - Operating temperature: -18 – 57 ºC
  - Storage temperature: -29 – 74 ºC
  - Relative humidity: 0 – 95%

**Power Requirements**

- MX396/C-DUAL: 48 – 52 Vdc phantom, 10.0 mA
- MX396/C-TRI: 48 – 52 Vdc phantom, 12.0 mA

**Available Models**

- MX396/C-DUAL: Dual-Element 0-180 degrees, back or bottom exit cable, mute output, LED input
- MX396/C-TRI: Tri-Element 90-0-90 mic, adjustable to 120-120-120 degrees, back or bottom exit cable, mute output, LED input

**Furnished Accessories and Replacement Parts**

- 65A2190: Fastening wingnut
- R185B: Cardioid replacement cartridge (x 1)
- 31A2165: Fastening tube
- 65A405: Rubber isolation rings

**Architectural Specifications**

MX396/C-Dual – The microphone shall be a surface mounted, black electret condenser microphone with two cardioid polar pattern elements, each with individual channel output. The microphone shall include a logic enabled, bi-color status indicator and programmable mute switch. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency range shall be 50 Hz to 17 kHz and the sensitivity of each individual element, 18 mV/Pa.

MX396/C-Tri - The microphone shall be a surface mounted, black electret condenser microphone with three cardioid polar pattern elements, each with individual channel output. The microphone shall include a logic enabled, bi-color status indicator and programmable mute switch. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency range shall be 50 Hz to 17 kHz and the sensitivity of each individual element, 18 mV/Pa.

www.shure.de
MX395 Low Profile Boundary Microphones

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Condenser (electret bias)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response</td>
<td>50 Hz – 17 kHz</td>
</tr>
</tbody>
</table>
| Polar Pattern         | MX395/O: Omnidirectional  
|                       | MX395/C: Cardioid  
|                       | MX395/Bi: Bidirectional                  |
| Output Impedance      | EIA rated at 150 Ω (170 Ω actual)        |
| Output Configuration  | Active balanced                          |
| Sensitivity           | Cardioid: –35 dBV/Pa (18 mV)  
|                       | Omnidirectional: –28 dBV/Pa (42 mV)  
|                       | Bidirectional: –37 dBV/Pa (14 mV)       |
| Maximum SPL           | Cardioid: 121 dB  
|                       | Omnidirectional: 114 dB  
|                       | Bidirectional: 123 dB                   |
| Equivalent Output Noise A-weighted | Cardioid: 28 dB SPL  
|                       | Omnidirectional: 21 dB SPL  
|                       | Bidirectional: 20 dB                    |
| Signal-to-Noise Ratio | Cardioid: 66 dB  
|                       | Omnidirectional: 73 dB  
|                       | Bidirectional: 65 dB                    |
| Dynamic Range         | 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 g; Packaged: 374 g               |
| Logic Connections     | LED IN: Active low (≤ 1.0 V), TTL compatible. Absolute maximum voltage: –0.7 V to 5.0 V |
| Environmental Conditions | Operating temperature: –18 – 57 °C  
|                       | Storage temperature: –25 – 74 °C  
|                       | Relative humidity: 0 – 95%              |
| Power Requirements    | MX395: 11 – 52 Vdc phantom, 2.0 mA  
|                       | MX395-LED: 48 – 52 Vdc phantom, 8.0 mA  |

Available Models

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

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX395BC, MX395B/Bi, MX395BO</td>
<td>Black, 3-pin XLR</td>
</tr>
<tr>
<td>MX395ALC, MX395AL/Bi, MX395ALO</td>
<td>Aluminum, 3-pin XLR</td>
</tr>
<tr>
<td>MX395WC, MX395W/Bi, MX395W/O</td>
<td>White, 3-pin XLR</td>
</tr>
<tr>
<td>MX395BC-LED, MX395B/Bi-LED, MX395BO-LED</td>
<td>Black, 5-pin XLR, LED, bi-color status indicator</td>
</tr>
<tr>
<td>MX395ALC-LED, MX395AL/Bi-LED, MX395ALO-LED</td>
<td>Aluminum, 5-pin XLR, LED, bi-color status indicator</td>
</tr>
<tr>
<td>MX395WC-LED, MX395W/Bi-LED, MX395W/O-LED</td>
<td>White, 5-pin XLR, LED, bi-color status indicator</td>
</tr>
</tbody>
</table>

www.shure.de
MX395 Low Profile Boundary Microphones

Furnished Accessories
654005 Rubber isolation rings
9511118 (LED Models only) 5-pin XLR-female connector
6542190 Wing nut

Architectural Specifications
MX395AUC - The microphone shall be a surface mounted, aluminum finish, electret condenser microphone with low-cut switch and cardioid polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395AUC-LED - The microphone shall be a surface mounted, aluminum, electret condenser microphone with low-cut switch and cardioid polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395BVC - The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and cardioid polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395BVC-LED - The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and cardioid polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395WVC - The microphone shall be a surface mounted, white, electret condenser microphone with low-cut switch and cardioid polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395WVC-LED - The microphone shall be a surface mounted, white, electret condenser microphone with low-cut switch and cardioid polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395AUU - The microphone shall be a surface mounted, aluminum finish, electret condenser microphone with low-cut switch and bi-directional polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395AUU-LED - The microphone shall be a surface mounted, aluminum, electret condenser microphone with low-cut switch and bi-directional polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395BUU - The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and bi-directional polar pattern. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395BUU-LED - The microphone shall be a surface mounted, black, electret condenser microphone with low-cut switch and bi-directional polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395BUUW - The microphone shall be a surface mounted, white, electret condenser microphone with low-cut switch and bi-directional polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

MX395BUUW-LED - The microphone shall be a surface mounted, white, electret condenser microphone with low-cut switch and bi-directional polar pattern. The microphone shall include a logic controlled, bi-color status indicator. The visible diameter and height of the microphone above the mounting surface shall be 32 mm and 24 mm. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response range shall be 50 Hz to 17 kHz and the sensitivity 18 mLPa.

www.shure.de

SHURE
LEGENDARY PERFORMANCE
MX690 Wireless Boundary and MX890 Wireless Desktop Base

The Microflex Wireless Boundary Microphone as well as the Wireless Desktop Base offer total freedom of placement with no holes to drill or cables to run for installation. They are the perfect solution for conference and meeting spaces where users demand flexibility and high performance. Compatible with Shure SLX Wireless Systems, including the SLX41L receiver with logic signal output for applications requiring logic functionality.

Specifications

**MX690 Microphone Specifications**

- **Type**: Condenser (electret bias)
- **Frequency Response**: 50 Hz – 17 kHz
- **Polar Pattern**: Cardoid
- **Sensitivity**: -33 dBV/Pa (22 mV)
  - at 1 kHz, open-circuit voltage: 1 Pascal = 94 dB SPL
- **Dynamic Range**: 95 dB 1 kΩ load at 1 kHz
- **Common Mode Rejection**: 45 dB minimum 10 Hz to 100 kHz
- **Preamplifier Output Clipping Level**
  - 1% THD = -6 dBV (0.6 V)
- **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 (both on SLX4 or SLX41L wireless receiver).

**MX690 and MX890 Transmitter Specifications**

- **RF Power**: 10 mW
- **Operating Range**: 30 m
  - 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**: 3 V (2 AA alkaline or rechargeable batteries)
- **Battery Life**: ≥8 hours (alkaline)
- **Power Consumption**: 130 mA ± 15 mA
- **Operating Temperature Range**: -18 – 57 °C
  - Note: Battery may limit this range
- **Dimensions (H x W x L)**: 43 mm x 87 mm x 148 mm
- **Weight**
  - MX690 Net. 318 g
  - MX890 Net. 312 g
  - Packaged: 510 g
  - Packaged: 580 g
  - MX690 Net. 318 g (11.2 oz)

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

Architectural Specifications

**MX690** – The microphone shall be a surface mounted, black condenser microphone with a cardioid polar pattern. The microphone shall include a bicolored LED status indicator and a programmable mute switch. 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 50 Hz to 17 kHz and the sensitivity shall be 25 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 desktop base shall be used with the MX405 and MX410 series gooseneck microphones and shall feature a programmable mute switch.

www.shure.de
MX202 Overhead Microphones

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 10 cm (4") gooseneck, multiple preamp options for easy installation into ceilings or microphone stands, and versatile condenser cartridges for accurate sound reproduction in any setting.

Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Condenser (electret) bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response</td>
<td>50 Hz – 17 kHz</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>MX202/C: Cardioid</td>
</tr>
<tr>
<td></td>
<td>MX202/O: Omnidirectional</td>
</tr>
<tr>
<td></td>
<td>MX202/S: Supercardioid</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>150 Q rated at EIA (180 Q actual)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Cardioid: -35.0 dBV/Pa (17.8 mV)</td>
</tr>
<tr>
<td></td>
<td>Supercardioid: -33.5 dBV/Pa (21.1 mV)</td>
</tr>
<tr>
<td></td>
<td>Omnidirectional: -27.5 dBV/Pa (42.2 mV)</td>
</tr>
<tr>
<td>Maximum SPL</td>
<td>Cardioid: 124.2 dB</td>
</tr>
<tr>
<td></td>
<td>Supercardioid: 122.7 dB</td>
</tr>
<tr>
<td></td>
<td>Omnidirectional: 116.7 dB</td>
</tr>
<tr>
<td>Equivalent Output Noise A-weighted</td>
<td>Cardioid: 28.0 dB SPL</td>
</tr>
<tr>
<td></td>
<td>Supercardioid: 26.5 dB SPL</td>
</tr>
<tr>
<td></td>
<td>Omnidirectional: 20.5 dB SPL</td>
</tr>
<tr>
<td>Signal to Noise Ratio</td>
<td>Cardioid: 66.0 dB</td>
</tr>
<tr>
<td></td>
<td>Supercardioid: 67.5 dB</td>
</tr>
<tr>
<td></td>
<td>Omnidirectional: 73.5 dB</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>96.2 dB</td>
</tr>
<tr>
<td></td>
<td>100 dB at 0% distortion (internal modification)</td>
</tr>
<tr>
<td>Common Mode Rejection</td>
<td>45 dB minimum</td>
</tr>
<tr>
<td>Preamp Output Clipping Level</td>
<td>2% THD</td>
</tr>
<tr>
<td></td>
<td>0 dBV (0.5 V)</td>
</tr>
<tr>
<td>Polarity</td>
<td>Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output connector.</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>11 – 52 Vdc phantom, 2.0 mA</td>
</tr>
<tr>
<td>Environmental Requirements</td>
<td>Operating temperature range: -18° C – 57° C</td>
</tr>
<tr>
<td></td>
<td>Relative humidity: 0 – 95%</td>
</tr>
</tbody>
</table>

Available Models

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

MX202/C, MX202/B/S, MX202/B/N
Block mini-condenser microphone, includes cable, in-line preamplifier, and stand adapter

MX202/C, MX202/S, MX202/N
White mini-condenser microphone, includes cable, in-line preamplifier, and stand adapter

MX202/B/C, MX202/B/P/S, MX202/B/P/N
Black mini-condenser microphone, includes cable and plate-mounted preamplifier

MX202/W/C, MX202/W/P/S, MX202/W/P/N
White mini-condenser microphone, includes cable and plate-mounted preamplifier

www.shure.de
MX202 Overhead Microphones

Furnished Accessories

<table>
<thead>
<tr>
<th>R183B/WS (Black)</th>
<th>Black snap-fit boom windshield</th>
<th>6581752 Stand adapter (MIC-200B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9582064 (White)</td>
<td>White snap-fit boom windshield</td>
<td></td>
</tr>
<tr>
<td>RK202PK</td>
<td>Preamp kit, plate mounted, White (MIX202BP &amp; MIX202WP)</td>
<td>RK100PK White (MIX202BP &amp; MIX202WP)</td>
</tr>
<tr>
<td>80A476</td>
<td>Clamp (MIX202B &amp; MIX202WP)</td>
<td>80B489 Hang clip</td>
</tr>
</tbody>
</table>

Optional Accessories and Replacement Parts

<table>
<thead>
<tr>
<th>A202BB</th>
<th>Desk stand</th>
<th>R183B (Black)</th>
<th>R183W (White)</th>
<th>Omnidirectional cartridge for all Microflex models</th>
</tr>
</thead>
<tbody>
<tr>
<td>80A479</td>
<td>Strain relief</td>
<td>R184B (Black)</td>
<td>R184W (White)</td>
<td>Supercardioid cartridge for all Microflex models</td>
</tr>
<tr>
<td>A57F</td>
<td>Stabil adapter (MIX202B)</td>
<td>R185B (Black)</td>
<td>R185W (White)</td>
<td>Cardioid cartridge for all Microflex models</td>
</tr>
</tbody>
</table>

Architectural Specifications

MX202BC - The microphone shall be an electret condenser overhead microphone with a cardioid polar pattern, 10 cm gooseneck, in-line preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BS - The microphone shall be an electret condenser overhead microphone with a supercardioid polar pattern, 10 cm gooseneck, in-line preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BN - The microphone shall be an electret condenser overhead microphone with no included cartridge, 10 cm gooseneck, in-line preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BW - The microphone shall be an electret condenser overhead microphone with no included cartridge, 10 cm gooseneck, in-line preamplifier, and white finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BWP - The microphone shall be an electret condenser overhead microphone with no included cartridge, 10 cm gooseneck, plate-mounted preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BPW - The microphone shall be an electret condenser overhead microphone with no included cartridge, 10 cm gooseneck, plate-mounted preamplifier, and white finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BPS - The microphone shall be an electret condenser overhead microphone with a supercardioid polar pattern, 10 cm gooseneck, plate-mounted preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BWPIC - The microphone shall be an electret condenser overhead microphone with a cardioid polar pattern, 10 cm gooseneck, plate-mounted preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17.8 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.

MX202BWPIS - The microphone shall be an electret condenser overhead microphone with a supercardioid polar pattern, 10 cm gooseneck, plate-mounted preamplifier, and black finish. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 21.1 mV/Pa. The microphone shall offer the option to interchange cartridges with diverse polar pattern.
MX391, MX392, MX393 Boundary Microphones

With slim design and superior audio reproduction, Microflex Boundary Microphones are the ideal conference room solution. Equipped with features like 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.

Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Condenser (electret bias)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response</td>
<td>50 Hz – 17 kHz</td>
</tr>
</tbody>
</table>
| Polar Pattern | MX391/C, MX392/C, MX393/C: Cardioid  
                 MX391/S, MX392/S, MX393/S: Supercardioid  
                 MX391/O, MX392/O, MX393/O: Omnidirectional |
| Output Impedance | EIA rated at 150 (180 Ω actual) |
| Logic Connections (MX392 Only) | LED IN: Active low (≤0.5 V), TTL compatible. Absolute maximum voltage: 0.7 V to 50 V.  
                                      SWITCH OUT: Active low (≤0.5 V), sinks up to 20 mA, TTL compatible.  
                                      Absolute maximum voltage: -0.7 V to 50 V (up to 50 V through 3 kΩ). |
| Environmental Conditions | Operating temperature range: -18° C – 57° C  
                           Relative Humidity: 0 – 95% |
| Power Requirements | 11 – 52 Vdc; phantom, 2.0 mA |

<table>
<thead>
<tr>
<th>MX391</th>
<th>MX392/MX393</th>
</tr>
</thead>
</table>
| Sensitivity  
(at 1 kHz, open circuit voltage, 1 Pascal = 94 dB SPL; All settings -12 dB at 0 gain (internal modification)) | Cardioid: -29.5 dB (33.5 mV)  
Super cardioid: -28.3 dB (38.5 mV)  
Omnidirectional: -21.8 dB (61.4 mV) | Cardioid: -27.5 dB(SPL) (42.2 mV)  
Super cardioid: -26.5 dB(SPL) (47.3 mV)  
Omnidirectional: -22.0 dB(SPL) (79.4 mV) |
| Maximum SPL  
(1 kHz at 1% THD, 1 kΩ load; All settings +6 dB at 0 gain (internal modification)) | Cardioid: 118.8 dB  
Super cardioid: 117.5 dB  
Omnidirectional: 110.7 dB | Cardioid: 117.0 dB  
Super cardioid: 116.0 dB  
Omnidirectional: 111.5 dB |
| Equivalent Output Noise A-weighted | Cardioid: 22.6 dB SPL  
Super cardioid: 21.3 dB SPL  
Omnidirectional: 14.5 dB SPL | Cardioid: 23.0 dB  
Super cardioid: 22.0 dB  
Omnidirectional: 17.5 dB |
| Signal-to-Noise Ratio  
(referenced at 94 dB SPL at 1 kHz) | Cardioid: 71.4 dB  
Super cardioid: 72.7 dB  
Omnidirectional: 75.5 dB | Cardioid: 71.0 dB  
Super cardioid: 72.0 dB  
Omnidirectional: 76.5 dB |
| Dynamic Range 1 kΩ load at 1 kHz | 96.2 dB | 94.0 dB |
| Common Mode Rejection 10 Hz to 100 kHz | 45 dB minimum, 10 Hz to 100 kHz | 45 dB minimum, 10 Hz to 100 kHz |
| Preampifier Output Clipping Level 1% THD | -6 dBV (0.5 V) | -6 dBV (0.5 V) |
| Polarity | Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of the preamplifier XLR output  
Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output connector (MX393) or red wire relative to black wire (MX392). |

Available Models

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

- **MX391/C, MX391/S, MX391/O**: Black surface-mount microphone, attached 3.7 m cable terminated, 4-pin mini connector, separate preamplifier
- **MX391/W, MX391/W/S, MX391/W/O**: White surface-mount microphone, attached 3.7 m cable terminated, 4-pin mini connector, separate preamplifier
- **MX392/C, MX392/S, MX392/O**: Surface-mount microphone, programmable membrane on/off switch, logic input/output terminals, on/off indicator LED, screw terminal connections, attached 3.7 m un terminated cable
- **MX393/C, MX393/S, MX393/O**: Surface-mount microphone, programmable membrane on/off switch, on/off indicator LED, miniature three pin connector, and detachable 3.7 m cable.

www.shure.de
MX391, MX392, MX393 Boundary Microphones

Furnished Accessories

- 9582313 Zipper bag
- 804541 Switch paint mask (MX392/MX393)
- 804551 Paint mask (MX392/MX393)
- 364664 Paint plug (MX392/MX393)
- RK100PK In-line preamp (MX391/MX391W)

Optional Accessories and Replacement Parts

- R183B Unidirectional cartridge for all Microflex models
- R184B Supercardioid cartridge for all Microflex models
- R185B Cardioid cartridge for all Microflex models

- C129 3,7 m cable 3-pin miniature connector (TA3F) to male XLR (MX393)
- C130 Custom logic cable with threaded adapter
- 15A525 Custom logic cable (specify length)

www.shure.de
MX391, MX392, MX393 Boundary Microphones

Architectural Specifications

MX391/C - The microphone shall be a surface mounted, black electret condenser microphone with a cardioid polar pattern, a 3.7 m cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 33.5 mV/Pa.

MX391/S - The microphone shall be a surface mounted, black electret condenser microphone with a supercardioid polar pattern, a 3.7 m cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 38.5 mV/Pa.

MX391/J - The microphone shall be a surface mounted, black electret condenser microphone with an omnidirectional polar pattern, a 3.7 m cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 35.5 mV/Pa.

MX391/W - The microphone shall be a surface mounted, white electret condenser microphone with a cardioid polar pattern, a 3.7 m cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 35.5 mV/Pa.

MX391/K - The microphone shall be a surface mounted, white electret condenser microphone with a supercardioid polar pattern, a 3.7 m cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 38.5 mV/Pa.

MX391/JO - The microphone shall be a surface mounted, black electret condenser microphone with an omnidirectional polar pattern, a 3.7 m cable terminated with a 4-pin mini connector, and in-line preamplifier. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 81.4 mV/Pa.

MX392/C - The microphone shall be a surface mounted, black electret condenser microphone with a cardioid polar pattern, programmable membrane on/off switch, and logic controlled LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 42.2 mV/Pa.

MX392/S - The microphone shall be a surface mounted, black electret condenser microphone with a supercardioid polar pattern, programmable membrane on/off switch, and logic controlled LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 47.3 mV/Pa.

MX392/JO - The microphone shall be a surface mounted, black electret condenser microphone with an omnidirectional polar pattern, programmable membrane on/off switch, and logic controlled LED indicator. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 75.4 mV/Pa.

MX391/ML - The microphone shall be a surface mounted, black electret condenser microphone with a cardioid polar pattern, programmable membrane on/off switch with LED indicator. The microphone shall include a removable 3.7 m cable, connected to the microphone through a TA3F connector and which terminates to an XLR connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 42.2 mV/Pa.

MX391/S - The microphone shall be a surface mounted, black electret condenser microphone with a supercardioid polar pattern, programmable membrane on/off switch with LED indicator. The microphone shall include a removable 3.7 m cable, connected to the microphone through a TA3F connector and which terminates to an XLR connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 47.3 mV/Pa.

MX391/JO - The microphone shall be a surface mounted, black electret condenser microphone with an omnidirectional polar pattern, programmable membrane on/off switch with LED indicator. The microphone shall include a removable 3.7 cm (12") cable, connected to the microphone through a TA3 connector and which terminates to an XLR connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 75.4 mV/Pa.

SHURE®
LEGENDARY PERFORMANCE™

www.shure.de
MX150 Subminiature Condenser Lavalier Microphone

The Shure Microflex MX150 is a professional subminiature electret condenser lavalier microphone ideal for use in speech and other applications requiring low profile, discreet placement. Available with cardioid or omnidirectional patterns, the MX150 provides uncompromised sound quality and high reliability with minimal visibility for use in television broadcasting, corporate and educational lectures, AV teleconferencing, and sound reinforcement.

Features
- Available in cardioid or omnidirectional polar patterns and TQG/TA4F (for use in Shure bodypacks) or wired XLR variations
- ConMiShield® technology guards against interference from cellular RF devices and digital bodypack transmitters
- Matte black, sleek, low-profile design for inconspicuous placement
- Multi-position tie clip allows for a variety of placement options and features an integrated cable management system for convenient cord management with minimized handling noise
- Kevlar-reinforced soft-flex cable design further reduces handling noise while providing superior flexibility for routing and placement
- User-changeable equalization caps for response shaping (omnidirectional only)
- Snap-fit, concave windscreens provide protection from plosives and wind noise with minimal visibility
- Legendary Shure quality, ruggedness, and reliability

Available Models
- MX150/B0-TQG: Microflex subminiature condenser lavalier microphone, omnidirectional, TQG connector
- MX150/B0-TCQG: Microflex subminiature condenser lavalier microphone, cardioid, TQG connector
- MX150/B0-XLR: Microflex subminiature condenser lavalier microphone, omnidirectional, XLR connector
- MX150/BC-XLR: Microflex subminiature condenser lavalier microphone, cardioid, XLR connector

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>MX150/C</th>
<th>MX150/O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transducer Type</td>
<td>Electret condenser</td>
<td>Electret condenser</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>Cardioid</td>
<td>Cardioid</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>20 – 20 kHz</td>
<td>20 – 20 kHz</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>TQG: N/A, XLR: 166.5 Ω</td>
<td>TQG: N/A, XLR: 166.5 Ω</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>TQG: -10.0 dBV (3.0 mV)</td>
<td>TQG: -46.5 dBV (4.5 mV)</td>
</tr>
<tr>
<td>Maximum SPL</td>
<td>XLR: -30.0 dBV (11.0 mV)</td>
<td>XLR: -34.5 dBV (19.0 mV)</td>
</tr>
<tr>
<td>Clipping Level</td>
<td>TQG: 147.5 dB, XLR: 134.5 dB SPL</td>
<td>TQG: 143.0 dB, XLR: 130.0 dB SPL</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>TQG: 57.5 dB, XLR: 57.0 dB</td>
<td>TQG: 65.0 dB, XLR: 59.5 dB</td>
</tr>
<tr>
<td>Common Mode Rejection</td>
<td>TQG: N/A</td>
<td>TQG: N/A</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>TQG: 111.0 dB SPL, XLR: 97.5 dB SPL</td>
<td>TQG: 109.0 dB SPL, XLR: 95.5 dB SPL</td>
</tr>
<tr>
<td>Self Noise</td>
<td>TQG: 35.5 dB</td>
<td>TQG: 34.0 dB</td>
</tr>
<tr>
<td>Equivalent SPL, A-weighted, typical</td>
<td>XLR: 37.0 dB</td>
<td>XLR: 34.5 dB</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-18°C to 57°C</td>
<td>-18°C to 57°C</td>
</tr>
<tr>
<td>Polar</td>
<td>TQG: Positive pressure on diaphragm produces positive voltage on pin 3 with respect to pin 1</td>
<td></td>
</tr>
<tr>
<td>Power Requirements</td>
<td>5V DC (0.04 – 0.18 mA)</td>
<td></td>
</tr>
<tr>
<td>Cable Length</td>
<td>1.52 m</td>
<td>1.52 m</td>
</tr>
<tr>
<td>Weight</td>
<td>TQG: 21 g, XLR: 121 g</td>
<td>TQG: 22 g, XLR: 121 g</td>
</tr>
</tbody>
</table>

Accessories
- MX150: Storage pouch for MX150
- MX330: TQG/TA4F 4-pin connector
- XK100PK: XLR preamp

www.shure.de
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 and educational presentations, AV conferencing and live sound reinforcement. Available in three color options and direct TA4F connectivity to Shure bodypacks, the MX153 provides outstanding clarity in an extremely comfortable, over the ear design.

Features
- Subminiature, omni-directional cartridge offers superior speech clarity and enhanced plosive protection with no proximity effect
- Terminated with TA4F connector for direct connectivity to Shure wireless bodypack transmitters
- Ultra-lightweight, comfortable, flexible design is stable and easy to place over either ear
- CommsShield® technology guards against interference from cellular RF devices and digital bodypack transmitters
- Kevlar reinforced, attached soft flex-cable
- Matte black, tan, and cocoa color options available
- Includes protective storage pouch, 3 windscreens, and collar clip

Available Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX153BTD-TQG</td>
<td>Microlite earset headworn condenser microphone, omni-directional, TA4F connector, black</td>
</tr>
<tr>
<td>MX153TDD-TQG</td>
<td>Microlite earset headworn condenser microphone, omni-directional, TA4F connector, tan</td>
</tr>
<tr>
<td>MX153CDD-TQG</td>
<td>Microlite earset headworn condenser microphone, omni-directional, TA4F connector, cocoa</td>
</tr>
</tbody>
</table>

Specifications MX153

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transducer Type</td>
<td>Electret condenser</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>Omni-directional</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>20 Hz – 20 kHz</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>N/A</td>
</tr>
<tr>
<td>Sensitivity open circuit voltage, @ 1 kHz, typical</td>
<td>–41 dBV (9 mV)</td>
</tr>
<tr>
<td>Maximum SPL</td>
<td>2500 D (load) 107 dB SPL</td>
</tr>
<tr>
<td>1 kHz at 1% THD</td>
<td>1000 D (load) 107 dB SPL</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>60 dB</td>
</tr>
<tr>
<td>Dynamic Range @ 1 kHz</td>
<td>2500 D (load) 73 dB</td>
</tr>
<tr>
<td></td>
<td>1000 D (load) 73 dB</td>
</tr>
<tr>
<td>Common Mode Rejection</td>
<td>N/A</td>
</tr>
<tr>
<td>Self Noise equivalent SPL, A-weighted, typical</td>
<td>34 dB</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>–18°C – 57°C</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>+1.5 V DC (500 µA maximum)</td>
</tr>
<tr>
<td>Weight</td>
<td>19.5 g</td>
</tr>
</tbody>
</table>

Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA150</td>
<td>Storage pouch for MX150</td>
</tr>
<tr>
<td>WA330</td>
<td>TA4F/M4F 4 pin connector</td>
</tr>
<tr>
<td>RK100PK</td>
<td>XLR preamp</td>
</tr>
</tbody>
</table>

www.shure.de
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, Lavaliars are available in different directional patterns, come with multiple clip options, and are compatible with all Shure wireless platforms.

Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Condenser (electret bias)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response</td>
<td>50 Hz – 17 kHz</td>
</tr>
</tbody>
</table>
| Polar Pattern | MX183: Omnidirectional  
                 MX184: Supercardioid  
                 MX185: Cardioid |
| Output Impedance | EIA rated at 150 Ω (170 Ω actual) |
| Sensitivity | MX183: -27.5 dB (42.2 mV)  
             MX184: -33.5 dB (21.1 mV)  
             MX185: -35.4 dB (17.0 mV) |
| Maximum SPL | MX183: 116.7 dB  
             MX184: 122.7 dB  
             MX185: 124.2 dB |
| Equivalent Output Noise A-weighted | MX183: 20.5 dB  
                                      MX184: 26.5 dB  
                                      MX185: 28.0 dB |
| Signal-to-Noise Ratio | MX183: 73.5 dB  
                              MX184: 67.5 dB  
                              MX185: 66.0 dB |
| Dynamic Range | 96.2 dB  
                   100 dB at 0 gain (internal modification) |
| Common Mode Rejection | 45 dB minimum |
| Polarity | Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector |
| Environmental Conditions | Operating temperature range -18°F - 57°F  
                                        Storage temperature range -20° - 74°F |
| Power Requirements | 11 – 52 Vdc phantom, 2.0 mA |
| Cable | Shielded 1.2 m cable terminated with a 4-pin female mini connector (T4F) |

Available Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MX183</td>
<td>Omnidirectional, includes belt-clip preamp, rotatable tie clip, dual tie clips, snap-fit windscreens</td>
</tr>
<tr>
<td>MX184</td>
<td>Supercardioid, includes belt-clip preamp, rotatable tie clip, dual tie clips, snap-fit windscreens</td>
</tr>
<tr>
<td>MX185</td>
<td>Cardioid, includes belt-clip preamp, rotatable tie clip, dual tie clips, snap-fit windscreens</td>
</tr>
</tbody>
</table>

www.shure.de
MX183, MX184, MX185 Lavalier Microphones

Furnished Accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>26A13</td>
<td>Zipper bag</td>
</tr>
<tr>
<td>RK183T1</td>
<td>Tie clip</td>
</tr>
<tr>
<td>RK261EWS</td>
<td>Foam windscreen</td>
</tr>
<tr>
<td>RK183T2</td>
<td>Dual iso clip</td>
</tr>
<tr>
<td>RK118WS</td>
<td>Snap-fit windscreen</td>
</tr>
<tr>
<td>RK100PK</td>
<td>In-line preamp</td>
</tr>
<tr>
<td>BOA67</td>
<td>Hex wrench #4</td>
</tr>
</tbody>
</table>

Optional Accessories and Replacement Parts

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R183B</td>
<td>Omnidirectional cartridge for all Microflex models</td>
</tr>
<tr>
<td>R184B</td>
<td>Supercardioid cartridge for all Microflex models</td>
</tr>
<tr>
<td>R185B</td>
<td>Cardioid cartridge for all Microflex models</td>
</tr>
<tr>
<td>MX18P</td>
<td>Battery powered preamp</td>
</tr>
<tr>
<td>53A2133A</td>
<td>Belt clip for in-line preamp</td>
</tr>
<tr>
<td>WA333</td>
<td>4-pin female mini connector (TAMF)</td>
</tr>
<tr>
<td>C133</td>
<td>Replacement cable, Microphone to preamp</td>
</tr>
</tbody>
</table>

Architectural Specifications

MX183 – The microphone shall be a black electret condenser lavalier microphone with an omni directional polar pattern, in-line belt-clip preamp, and 1.2 m cable that terminates with a 4-pin miniature (TAMF) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 42±4 mV/Pa.

MX184 – The microphone shall be a black electret condenser lavalier microphone with a supercardioid polar pattern, in-line belt-clip preamp, and 1.2 m cable that terminates with a 4-pin miniature (TAMF) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 23±1 mV/Pa.

MX185 – The microphone shall be a black electret condenser lavalier microphone with a cardioid polar pattern, in line belt-clip preamp, and 1.2 m cable that terminates with a 4-pin miniature (TAMF) connector. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency response shall be 50 Hz to 17 kHz and the sensitivity shall be 17±0.5 mV/Pa.