

MODEL MX392 and MX393 MICROPHONES



OVERVIEW

Shure Microflex[®] MX300 Series microphones are surface-mounted electret condenser microphones designed primarily for mounting on conference tables, stage floors, and lecterns. Their high sensitivity and wide frequency range make them especially suitable for picking up speech and vocals in sound reinforcement and recording applications. Interchangeable cartridges provide the installer with greater flexibility and make it possible to easily reconfigure microphone coverage as the need arises. The MX392 and MX393 models include an internal pre-amplifier.

MX300 Series microphones take advantage of the principle that, at a barrier or boundary, the sound pressure level doubles. When placed near a sufficiently large boundary surface, the microphone has 6 dB higher sensitivity and approximately 3 dB greater direct-to-reverberant sound ratio.

FEATURES

- Flat frequency response across the vocal range for uncolored sound
- Interchangeable cardioid, supercardioid, and omnidirectional cartridges that provide choices for applications
- Sleek, low-profile design for unobtrusive appearance
- Balanced transformerless output for increased immunity to noise over long cable runs
- Low susceptibility to electromagnetic hum and RFI
- Programmable on/off switch and LED on/off indicator
- Logic input/output terminals for remote control or use with automatic mixers (MX392 models only)

MODEL VARIATIONS

- **MX392 Models:** Surface-mount microphone; includes a programmable membrane on/off switch, logic input/output terminals, an on/off indicator LED, screw terminal connections, and attached unterminated cable.
- **MX393 Models:** Surface-mount microphone; includes a programmable membrane on/off switch, an on/off indicator LED, and a miniature, four pin connector.

MICROPHONE APPLICATION AND SELECTION GUIDE					
Application	Mounting Surface	Microphone to Cable Connector	Cable Output Connector	Polar Pattern	Microflex [®] Model
Sound reinforcement for speech and vocals	Lectern, pulpit, stage floor, or conference table	Hard Wired Hard Wired TA4F TA4F	Hard Wired Hard Wired XLR XLR	Cardioid Supercardioid Cardioid Supercardioid	MX392/C MX392/S MX393/C MX393/S
Recording or remote monitoring of speech and vocals	Lectern, pulpit, stage floor, or conference table	Hard Wired TA4F	Hard Wired XLR	Omnidirectional Omnidirectional	MX392/O MX393/O
Video conferencing or computer telephony	Lectern, pulpit, stage floor, or conference table	Hardwired	TA4F	Cardioid	MX392/CZ

SPECIFICATIONS

All measurements taken with microphone mounted on a wooden surface 76.2 cm x 76.2 cm (30 in. x 30 in.).

Frequency Response (Figure 1)

50 to 17,000 Hz

Polar Pattern (Figure 2)

Cardioid (MX392/C, MX393/C)
Supercardioid (MX392/S, MX393/S)
Omnidirectional (MX392/O, MX393/O)

Output Impedance

EIA Rated at 150 Ω (180 Ω actual)

Sensitivity (at 1 kHz, open circuit voltage)

Cardioid Cartridge: -27.5 dBV/Pa (4.22 mV)
Supercardioid Cartridge: -26.5 dBV/Pa (4.73 mV)
Omnidirectional: -22.0 dBV/Pa (7.94 mV)
1 Pascal=94 dB SPL

Maximum Sound Pressure Level**(1 kHz at 1% Total Harmonic Distortion, 1 k Ω load)**

Cardioid: 117.0 dB
Supercardioid: 116.0 dB
Omnidirectional: 111.5 dB

Signal to Noise Ratio (referenced at 94 dB SPL)

Cardioid: 71.0 dB
Supercardioid: 72.0 dB
Omnidirectional: 76.5 dB

Equivalent Output Noise (A-weighted)

Cardioid: 23.0 dB
Supercardioid: 22.0 dB
Omnidirectional: 17.5 dB

Dynamic Range

94.0 dB

Common Mode Rejection

45 dB minimum, 10 Hz to 100 kHz

Switch Attenuation

50 dB minimum

Preamplifier 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 connector.

Logic Connections (MX392 Only)

LED IN: Active low ($\leq 1.0\text{v}$), TTL compatible. Absolute maximum voltage: -0.7V to 50V.

SWITCH OUT: Active low ($\leq 0.5\text{V}$), sinks up to 20mA, TTL compatible. Absolute maximum voltage: -0.7V to 24V (up to 50V through 3k Ω).

Power Requirements

11 to 52 Vdc phantom
2.0 mA current consumption

Environmental Requirements

Operating Temperature Range: -18° C to 57° C (0° F to 135° F)

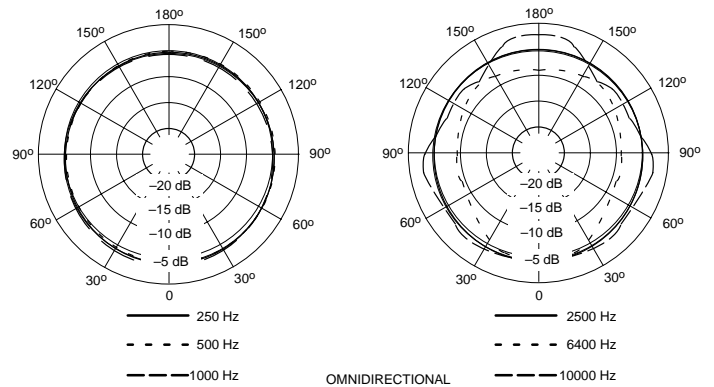
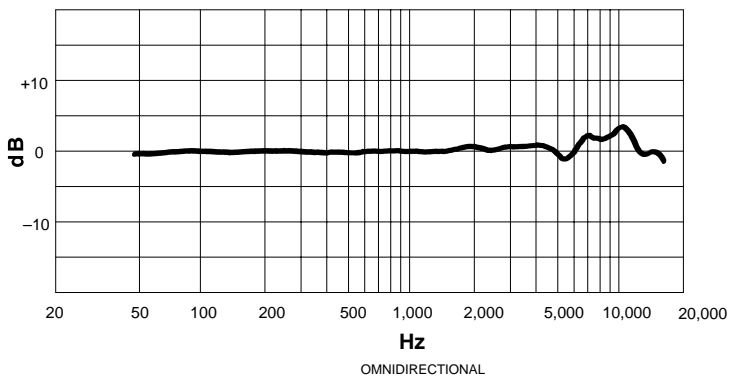
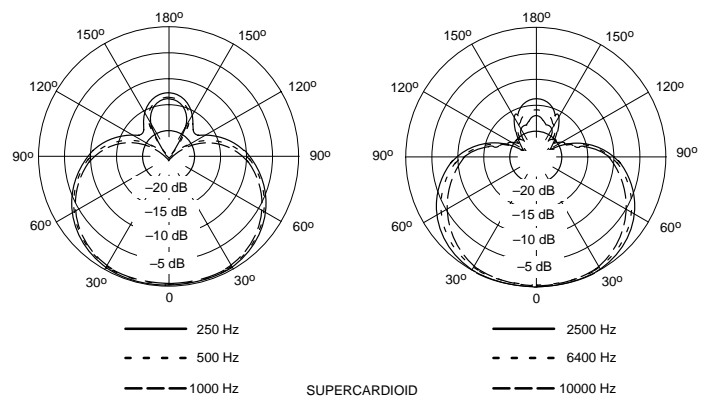
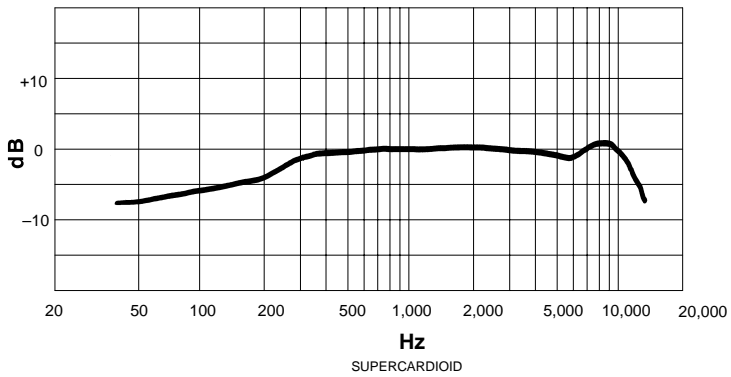
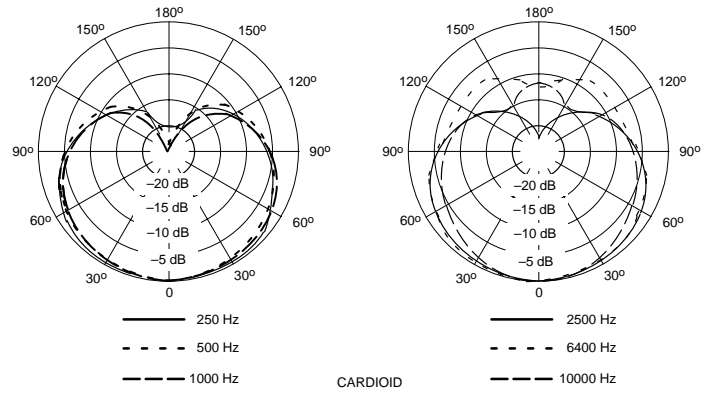
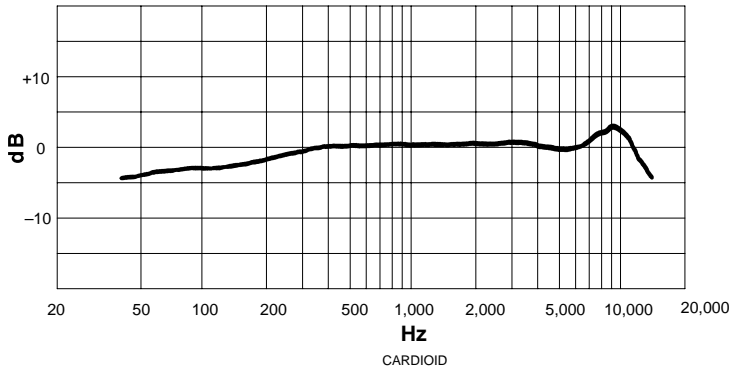
Relative Humidity: 0 to 95%

Dimensions (Figure 3)**Certification**

Eligible to bear CE Marking. Conforms to European EMC Directive 89/336/EEC. Meets applicable tests and performance criteria in European Standard EN55103 (1996) parts 1 and 2, for residential (E1) and light industrial (E2) environments.

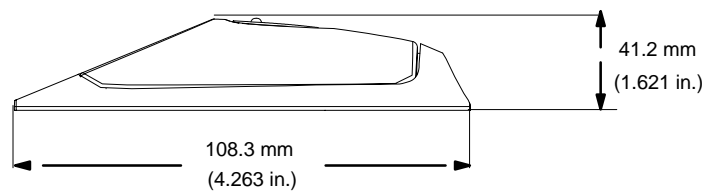
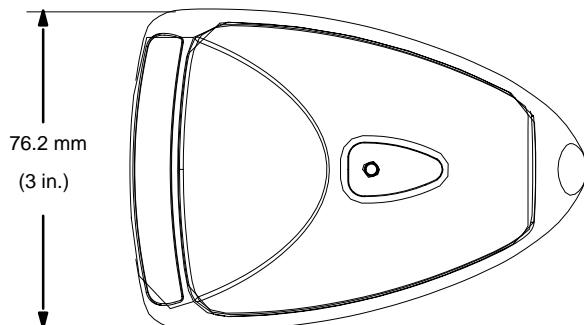
REPLACEMENT PARTS

Omnidirectional Cartridge	R183
Supercardioid Cartridge	R184
Cardioid Cartridge	R185
12' (3.7m) Cable 3-Pin Miniature Connector (TA3F) to male XLR	C119



TYPICAL FREQUENCY RESPONSE
Figure 1

TYPICAL POLAR PATTERNS
Figure 2



DIMENSIONS
Figure 3