Measurement Microphone

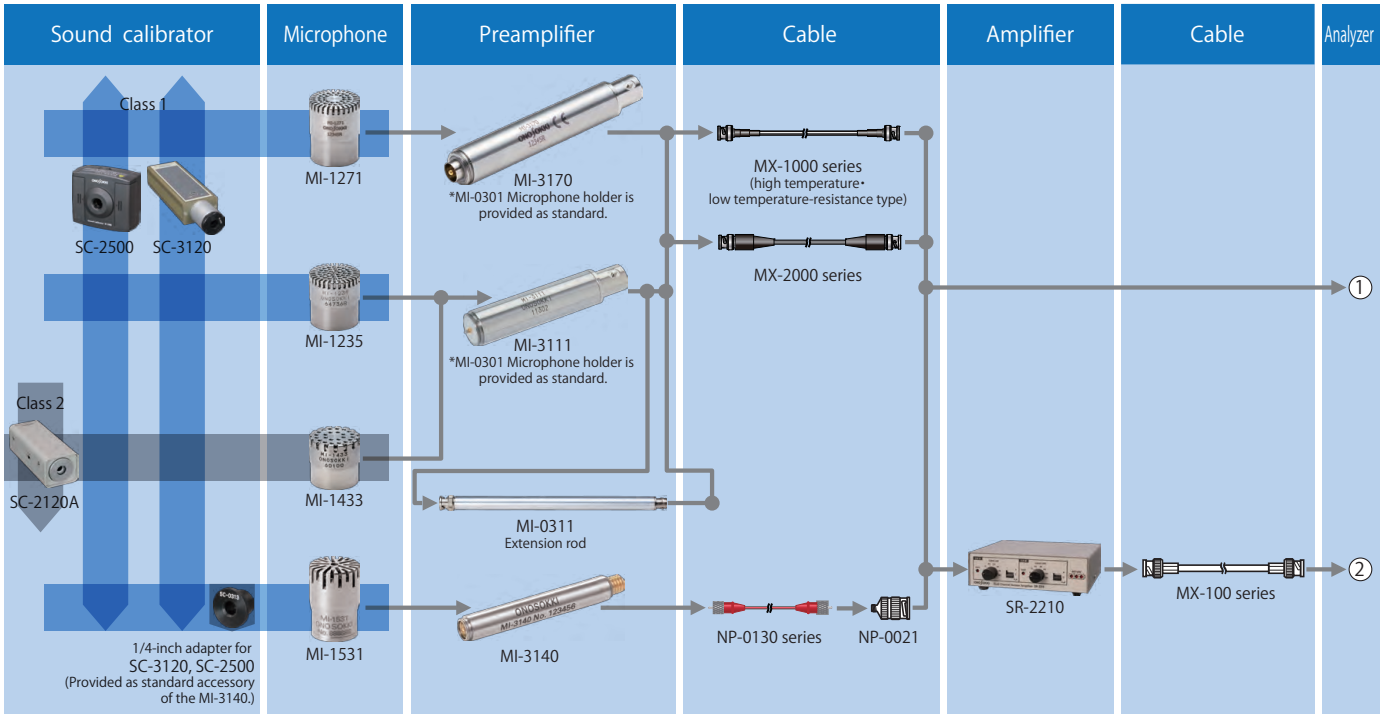
MI *series*

Microphone / Preamplifier
Sound Calibrator / Peripheral Product

ONOSOKKI

Measurement Microphone

System Configuration



※：Analyzer
①：CCLD（BNC connector）
②：Voltage input
（BNC connector）


DS-3000 series
Data Station


CF-9200 / 9400
Portable 2ch / 4ch FFT Analyzer


CF-4700
FFT Comparator


DR-7100
Data Recorder

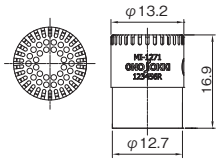
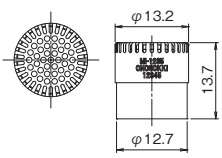
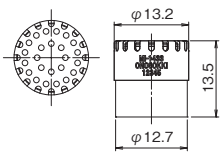
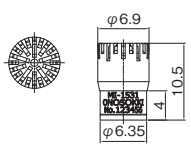
*Please contact us for more details about each product.

Sound Calibrator Specification

Model name	SC-3120	SC-2500	SC-2120A
Appearance			
Applicable standard	IEC 60942:2003 Class 1/C JIS C 1515:2004 Class 1/C	IEC 60942:2017 Class 1 ANSI S1 40 2006 (R2011) JIS C 1515:2004 Class 1	IEC 60942:2003 Class 2 JIS C 1515:2004 Class 2
Method	Piston-phone	Dynamic speaker	
Applicable microphone	1/2-inch microphone : MI-1211/1233/1234/1235/1271, MI-1431/1432/1433 1/4-inch microphone : MI-1531* *SC-0313 adapter attached to MI-3140 1/4-inch preamplifier is required.		1/2-inch microphone MI-1431 / 1432 / 1433
Sound pressure level	Nominal sound pressure level：114 dB Deviation of sound pressure level: ±0.4 dB or less*	Nominal sound pressure level：114 dB Deviation of sound pressure level: ±0.25 dB or less*	Nominal sound pressure level：94 dB Deviation of sound pressure level: ±0.5 dB or less*
Total distortion	2.5 % or less	0.5 % or less	
Frequency	Nominal frequency：250 Hz Frequency deviation* ±0.4 % or less*	Nominal frequency：1000 Hz Frequency deviation* ±0.5 % or less*	Nominal frequency：1000 Hz Frequency deviation* ±1 % or less*
Operating environment	Air temperature：-10 to 50 ℃ (with no condensation) Static pressure ：65 to 108 kPa Relative humidity：25 to 90 % (Excluding a combination of air temperature and humidity that exceeds dew-point temperature of 39 ℃ or higher.)		
Power requirement	Size AA battery (R6P or LR6) × 3	Size AA battery (LR6 or HR6) × 2	9V flat battery (6F22 or 6LR61) × 1
Battery life	2.5 hours or more continuous operation (when using R6P)	4 hours or more continuous operation (when using LR6)	20 hours or more continuous operation (when using 6F22)
Outer dimensions (not including protruded section)	60 (W) × 38 (H) × 200 (D) mm	84 (W) × 53 (H) × 76 (D) mm	52 (W) × 45 (H) × 130 (D) mm
Weight	Approx. 600 g (not including battery cells)	Approx. 200 g (not including battery cells)	Approx. 300 g (not including battery cells)
Accessory	Instruction manual × 1　Barometer × 1 Size AA battery (R6P) × 3　Storage case × 1 SC-0312 (1/2-inch adapter) × 1	Instruction manual × 1 Size AA battery (LR6) × 2	Instruction manual × 1 9V flat battery (6F22) × 1

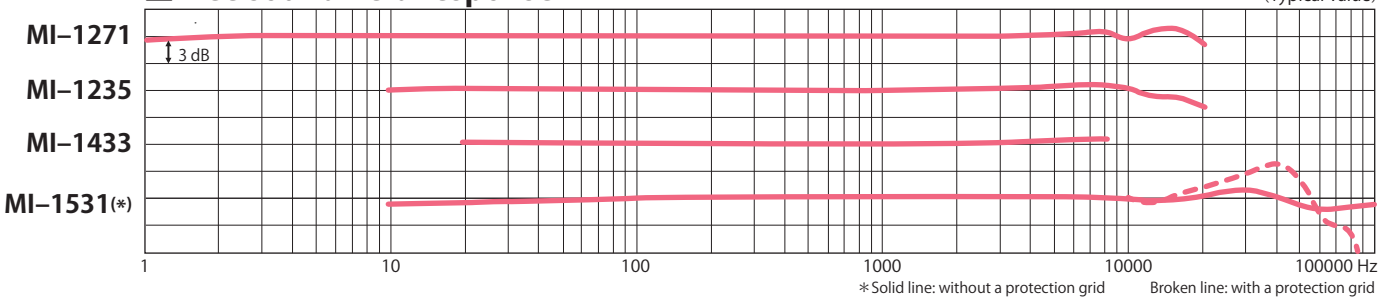
*: Under reference environment (reference environment condition: air temperature 23℃, static pressure 101.325 kPa, relative humidity 50 %)

Measurement Microphone Specification

Model name	MI-1271	MI-1235	MI-1433	MI-1531
Appearance				
Feature	•1/2-inch back electret type •High sensitivity •Supports low frequency •Supports measurement under severe temperature environment	•1/2-inch back electret type •Supports audible region •Cost-effective type	•1/2-inch back electret type •Cost-effective type	•1/4-inch back electret type •Wide band measurement (up to 100 kHz) •Space-saving design
Response type	Sound Field			
Polarization voltage	0V			
Sensitivity	-26 ± 1.5 dB re. 1 V/Pa 50 mV/Pa (1 kHz)	- 29 ± 3 dB re. 1V/Pa 36 mV/Pa (at 1 kHz)		-48 ± 3 dB re. 1 V/Pa 4 mV/Pa (250 Hz)
Frequency range	1 Hz to 20 kHz	10 Hz to 20 kHz	20 Hz to 8 kHz	10 Hz to 100 kHz (without protection grid) 10 Hz to 20 kHz (with protection grid)
Maximum sound pressure	135dB (when using the MI-3170)	135 dB (when using the MI-3111)		157dB (when using the MI-3140)
Cartridge thermal noise (typical, A-weighting)	14 dB (when using the MI-3170)	19 dB (when using the MI-3111)		30 dB (when using the MI-3140)
Operating temperature range	-30 to 80 °C	-10 to 50 °C		
Operating humidity range	0 to 90% (with no condensation)	20 to 90% (with no condensation)		0 to 90% (with no condensation)
Storage temperature range	-40 to 70 °C	-20 to 60 °C		
Storage humidity range	0 to 90 % (with no condensation)	10 to 90 % (with no condensation)		0 to 90 % (with no condensation)
Outer dimensions / weight	φ 13.2 x 16.9 mm / approx. 6 g	Φ13.2 x 13.7 mm / approx. 6 g	Φ13.2 x 13.5 mm / approx. 6 g	φ 6.9 x 10.5 mm / approx. 1.5 g
Applicable preamplifier	MI-3170	MI-3111		MI-3140
Accessory	Calibration chart, instruction manual			
Outer appearance (Unit: mm)				

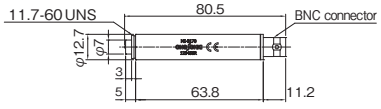
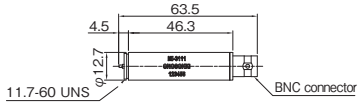
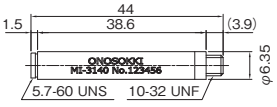
■Free sound field response

(Typical value)

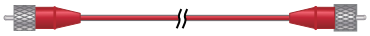


＊Solid line: without a protection grid　Broken line: with a protection grid

Preamplifier Specification

Model name	MI-3170	MI-3111	MI-3140
Appearance			
Feature	•Supports low frequency •Supports measurement under severe temperature environment •Supports measurement of very small sound	•Cost-effective type •Multi-channel measurement	•Space-saving design •Supports wide frequency range
Size	1/2-inch		1/4-inch
Attenuation (typical)	0.15 dB	1.0 dB	0.25 dB
Frequency range	10 Hz to 40 kHz (+0.1 dB, -0.2 dB, 1 kHz as reference) 1 Hz to 40 kHz (+0.1 dB, -1.5 dB, 10 Hz as reference)	10 Hz to 20 kHz (±1.0 dB, 1 kHz as reference) 20 Hz to 20 kHz (±0.6 dB, 1 kHz as reference)	10 Hz to 100 kHz (±0.5 dB as reference)
Applicable microphone	MI-1271 / 1235 / 1433	MI-1235 / 1433	MI-1531
Intrinsic noise (effective value voltage, A-weighting)	3.3 μV or less	5.0 μV or less	2.5 μV or less (20 Hz to 20 kHz)
Max. Output voltage	±8 V (peak)　Sound pressure conversion 135 dB (when using the MI-1271)	±5.6 V (peak)　Sound pressure conversion 135 dB (when using the MI-1235 / 1433)	±8 V (peak)　Sound pressure conversion 157 dB (when using the MI-1531)
Operating temperature range	-30 to 80 °C	-10 to 50 °C	-30 to 60 °C
Operating humidity range	0 to 90 % (with no condensation)	30 to 90 % (with no condensation)	0 to 90 % (with no condensation)
Storage temperature range	-40 to 70 °C	-20 to 60 °C	-30 to 80 °C
Storage humidity range	0 to 90 % (with no condensation)	10 to 90 % (with no condensation)	0 to 95 % (with no condensation)
Power supply	CCLD　2 to 4.5 mA (rated 4 mA) 18 VDC to 26 VDC (rated 24 V)	CCLD　0.5 to 5 mA (rated 4 mA) 15 VDC to 25 VDC (rated 24 V)	CCLD　2 to 20 mA (rated 4 mA) 15 VDC to 25 VDC (rated 24 V)
Applicable connector	CO2(BNC)		10-32 UNF
Outer dimensions	φ12.7 × 80.5 mm	φ12.7 × 63.5 mm	φ 6.35 × 44 mm
Cable	MX-1000 series (recommended), MX-2000 series	MX-2000 series (recommended)	NP-0130 series (recommended)
Weight	Approx. 35 g (not including microphone)	Approx. 25 g (not including microphone)	Approx. 5.5 g (not including microphone)
Accessory	Protection cap for input connector × 1 MI-0301 (microphone holder for mounting tripod) × 1 Instruction manual × 1		Protection cap for input connector × 1 SC-0313 conversion adapter (1/2 to 1/4 inch) × 1 Instruction manual × 1
Outer appearance (Unit: mm)			

Signal Cable Specification

Model name	Length	Appearance	Product name	Remarks
MX-1001	1.5 m		Signal cable for low / high temperature	-30 to 80 ℃
MX 1005	5 m			
MX-1020	20 m			
MX-2001	1.5 m		Signal cable	0 to 60 ℃
MX-2005	5 m			
MX-2020	20 m			
NP-0131	1.5 m		Signal cable	Requires NP-0021 (sold separately)
NP-0132	3 m			
NP-0133	5 m			
NP-0134	10 m			
NP-0021	——		BNC Conversion plug	Use for NP-0130 series

Peripheral Products

■Windscreen φ70 mm

●Supports MI-3170 / 3111 / 3310
(not supported MI-3140)

■All-weather Windscreen φ200 mm

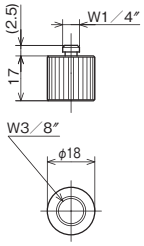
LA-0207A+LA-0208A
Cable : AG-2000 series

LA-0207A
Cable : AG-3000 series
MX-1000 / 2000 series
●Supports MI-3111
(not supported MI-3310 / 3140)
●A tripod is required.
(sold separately)

■Microphone holder MI-0301

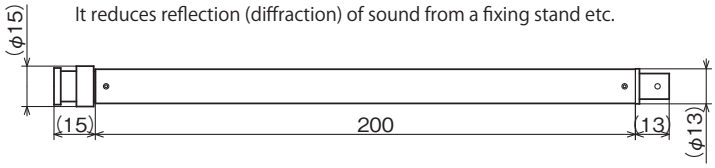
* MI-0301 microphone holder for 1/2-inch is provided as standard to MI-3170 and MI-3111.

■Conversion screw (1/4" → 3/8") MI-0302



■ Extension rod (for MI-3170 / 3111) MI-0311

Useful for distance adjustment from a measurement object.
It reduces reflection (diffraction) of sound from a fixing stand etc.



■Tripod LA-0203D (Made by SLIK Corporation)

Useful for fixing microphone amplifier or adjusting height.
Total length 1,543 mm, free camera platform type,
with a case.

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*Outer appearance and specifications are subject to change without prior notice.
URL: https://www.onosokki.co.jp/English/english.htm

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