# **Professional Microphones**



## **Condenser Microphones**

For Studio, Broadcast and Live applications.

Mic W ®

### MicW Audio

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MicW Audio warrants that its Products will be free from defects in material and workmanship for three (3) years from the date of purchase by the Original Purchaser.

Pictures for reference only, subject to our available products

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### **Preface**







We at BSWA and MicW are committed to the research, design, and manufacture of high quality microphones for measurement, studio, and broadcast use. We are passionate about pure sound, captured or amplified, and demand the highest standards of craftsmanship in all our products.

To keep up with demanding audio standards, we employ dedicated audio engineers, test engineers, and highly skilled carftsman to produce the best possible products. Using our own recording studio, we test and compare our microphones during all sorts of sessions in actual use like our customers. We are proud to play a role in optimizing and refining your recordings, live performances, and broadcasts with our products.

Our nickel diaphragm N-Series ranges from the ubiquitous N241 Reference to the remarkable N401 High Definition. These microphones hold impressive specifications resulting in clear, pure sound reproduction. Consider the N401 HD for instance: Its tiny 7mm (1/4 inch) capsule boasts a flat frequency response from 20 Hz to 70 kHz supporting a maximum sound pressure level (SPL) of 155 dB. It's an outstanding choice for your extreme audio recording needs.

From nickel on to titanium, we work with the best of materials. The T-Series carries an impressive 38 mm (1 1/2 inch) capsule with diaphragm made of titanium. Both the T551 cardioid and the T501 omnidirectional are large diaphragm condenser (LCD) microphones. This new approach in design and use of high grade materials offer you a new and exciting recording experience.

Not only do we research new approaches, but we constantly strive for new innovations. Early in 2011, we released the i-Series external professional microphones for the iPhone, iPad, iPod Touch and other mobile devices. The interest and acceptance of the i436 Class 2 microphone was overwhelming. We invite you to read our new separate i-Series 2012 brochure, or visit the MicW website, http://www.mic-w.com, for more information.

In 2012, we strive to improve our service to you and optimize the perfection of our products. We hope to meet you soon at one of the pro audio exhibitions this year and would be pleased to discuss and demonstrate our products to you.

WU QUNLI, Ph.D, CEO

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## **T-Series**

### **General Description**

The microphone capsule, the most important element of each microphone, is the absolute highlight of the T-series. The capsule made of pure titanium with a diameter of 38mm is manufactuered in a special (secret) process under clean room conditions.



#### Microphone Placement:

It is a common view in the recording industry that the music played by skilled musicians, with a quality instrument properly miked, can be sent directly to the daw recorder with little or no modification.

The T capsule housing contains a real popfilter inside.

#### Why Titanium?

For a capsule of this size, material must meet very specific requirements:

- Very light
- Extremely stiff
- Maximum vibration characteristics

This combination of requirements only can be found with true Titanium.

The capsule housing is made of solid copper and brings the necessary weight to effectively suppress resonances . After manufacturing, each capsule stays for 24 hours in the climate chamber, and gets artificially aged. The often noticed changes in sound, due to aging related circumsatnces are largely excluded.

Preferred	Recommanded
Acoustic Guitar	Solo Vocals
Backing Vocals	Grand Piano
Bongos	Upright piano
Congas	Cello
Cymbals	Clarinet
Horn	Tom Tom
Hi-hat	Violin
Harmonica	Guitar amplifier
Flute	Bass amplifier
Trumpet	Woodwind
Trombone	Marimba
Sax	

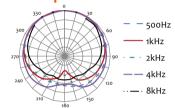


## **T551 Cardioid LCD**

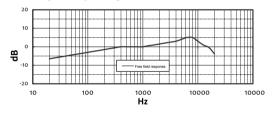
### **Specifications**

Microphone T55	1
Туре	Pre-polarized Condenser
Capsule diameter	38mm
Polar pattern	cardioid
Sensitivity(±3dB)	4omV/Pa;
Frequency response	20Hz~20kHz
Power supply	48V Phantom Power
Max. SPL(<1% THD)	135 dB
Equ. noise level	<16 dBA
Output impedance	<200 Ohm
Length	163mm
Weight	340g
Connector	3-pin XLR

### Polar pattern



### Frequency response



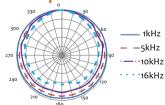


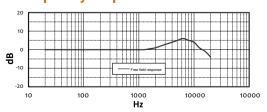
## **T501 Omni Directional LCD**

### **Specifications**

Microphone T501	
Туре	Pre-polarized Condenser
Capsule diameter	38mm
Polar pattern	omni
Sensitivity(±3dB)	4omV/Pa
Frequency response	20Hz~20kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	135 dB
Equ. noise level	<16 dBA
Output impedance	<200 Ohm
Length	163mm
Weight	340g
Connector	3-pin XLR

### Polar pattern









The N series microphones are based upon the Nickel diaphragm capsules, derived from the leading technology inherited from BSWA (the parent company of MicW). It ranges from 1 inch over ½ inch to ¼ inch products and together with the compact microphone range (CN series) The N Series provides a range of Onmi directional and Cardioid polar patterns type of microphones.

# **N-Series**

With its Nickel diaphragm capsule and its high-quality preamplifier the N series delivers a very natural, transparent sound with very high sound fidelity. The only  $5\mu m$  thin Nickel membrane, mounted in a stainless steel housing, is optimized and stretched manually for the best transmission. This is an elaborate process, but it is the only way to achieve the extraordinary quality.

With the very low noise floor and impressive maximum SPL (up till 155dB), the N series offers unparalleled frequency response from 20Hz up to 70 Khz. This makes the N series the perfect partner to deliver pure sound with no color added.

Due to their discreet size, the CN series are ideal for close miking of instruments during live performances and TV production work.

Preferred	Recommanded
Acoustic Guitar	Ensemble / Choir
Acoustic Bass	Solo Vocals
Double Bass	Grand Piano
Backing Vocals	Upright piano
Bongos	Cello
Congas	Clarinet
Cymbals	Tom Tom
Horn	Violin
Hi-hat	Guitar amplifier
Harmonica	Bass amplifier
Flute	Woodwind
Trumpet	Marimba
Trombone	Kick drum
Sax / brass	Mallets
basson	



What's in the N series Box: The N series are delivered in a hard shell plastic transport case Including a professional shock mount, wind screen and frequency test report.





## N101 Large Diaphragm

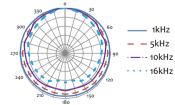


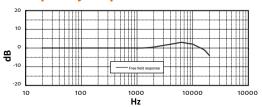
The N101 is an omni directional microphone that uses 1 inch capsule and with totally transparent preamplifier. The capsule is designed using stainless-steel housing and 5-micron-thick nickel diaphragm. The diaphragm tension is carefully adjusted during manufacturing to ensure the frequency response from 20 Hz to 20k Hz. The N101 offers a totally transparent audio path with an exceptionally low noise floor and a SPL handling capability of 135 dB SPL. The N101-Pair is a state-of-the-art stereo kit featuring two matched N101 microphones. Each pair is guaranteed to the sensitivity match within 0.5 dB and phase match within 5°.

### **Specifications**

Pre-polarized Condenser
23.8mm
Omni
50mV/Pa;
20Hz~20kHz
48V Phantom power
135 dB
<18 dBA
<2000hm
157mm
165g
3-pin XLR

### Polar pattern







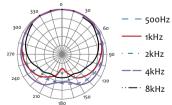
# N151 Cardioid Large Diaphragm

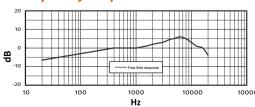
The N151 is a cardioid microphone that uses pressure gradient capsule. The capsule uses the similar material as N101 with nickel diaphragm and stainless steel housing. The capsule is carefully handcrafted to provide optimal neutrality, accuracy, and extremely low distortion. The first-order cardioid pick-up pattern gives superb separation between sound sources while spot-miking on every kind of live music.

### **Specifications**

Microphone N151	
Type	Pre-polarized Condenser
Capsule diameter	23.8mm
Polar pattern	Cardioid
Sensitivity(±3dB)	32mV/Pa;
Frequency response	20Hz~20kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	137 dB
Equ. noise level	<19 dBA
Output impedance	<2000hm
Length	157mm
Weight	165g
Connector	3-pin XLR

### **Polar pattern**









### N201 Standard Omni

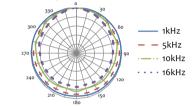
The N201 is an omni directional microphone that uses the 1/2" capsule with the totally transparent preamplifier. It is suitable for the most critical recording applications requiring extreme performance and environmental stability. The N201 has the flat frequency response from 20 Hz to 20k Hz, with low noise floor of 18 dB (A). The N201 has a number of acoustic accessories –directional modifiers, and protection grids. The acoustic accessories modify the acoustic behaviors of the microphones in terms of directional patterns and high frequency responses.

The N201-pair is a state-of-the-art stereo kit featuring two matched N201 microphones. Each pair is guaranteed to the sensitivity match within 0.5 dB and phase match within 5°.

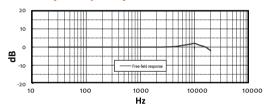
### **Specifications**

•	
Microphone N201	
Type	Pre-polarized Condenser
Capsule diameter	12.7mm
Polar pattern	Omni
Sensitivity(±2dB)	4omV/Pa;
Frequency response	20Hz~20kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	135 dB
Equ. noise level	<18 dBA
Output impedance	<75 Ohm
Length	155mm
Weight	120g
Connector	3-pin XLR

### Polar pattern



### **Frequency response**





### N241 Reference

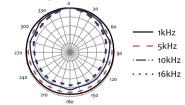
The N241 is a reference microphone that uses 1/2" all-metal capsule. It is carefully engineered to give long term reliability and accuracy. The N241 has a linear frequency response up to 40k Hz which is achieved by a superior acoustical and mechanical design. The N241 can handle the extreme sound level up to 140 dB. You can close-mike drums, percussion and brass or other powerful sound sources with total accuracy for a clean, undistorted dynamic sound.

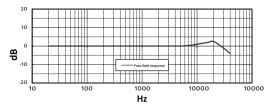
The N241 is designed according to IEC 61094 standard dimensions. It can be calibrated by using the BSWA CA 114 Sound Level Calibrator.

### Specifications

Microphone N241	
Type	Pre-polarized Condenser
Capsule diameter	12.7mm
Polar pattern	Omni
Sensitivity(±2dB)	26mV/Pa;
Frequency response	20Hz~40kHz
Power supply	48V Phantom power
Max. SPL(<1%THD)	140 dB
Equ. noise level	<22 dBA
Output impedance	<750hm
Length	150mm
Weight	120g
Connector	3-pin XLR

### Polar pattern









## **N401 High Definition**

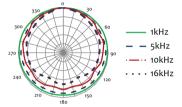
The N401 HD is a high definition microphone that has frequency response up to 70 kHz. The capsule uses the nickel diaphragm technology that delivers pure sound with no color added. The N401 is the omni directional microphone whose directional pattern can be altered by the MicW acoustic modifiers. The acoustics modifiers have diameter of 30, 40, and 50 mm.

The N401 HD has very high dynamic range. It can handle the sound pressure level up to 155 dB with very low distortions. The N401 is also available in pairs, whose sensitivities and phases are matched within narrow tolerances. The N401 HD is the ideal microphone for recordings with high sample rate frequencies.

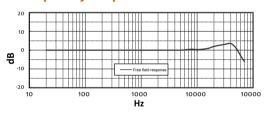
### **Specifications**

Microphone N401	
Туре	Pre-polarized Condenser
Capsule diameter	7mm
Polar pattern	Omni
Sensitivity(±2dB)	4mV/Pa;
Frequency response	20Hz~70kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	155dB
Equ. noise level	<34 dBA
Output impedance	<75 Ohm
Length	145mm
Weight	110g
Connector	3-pin XLR

### Polar pattern



### Frequency response



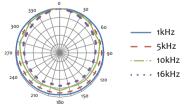
## **CN201 Compact**

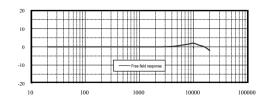
The CN201 is a compact omni directional microphone that uses the similiar 1/2" capsule as N201. Due to the small footprint of the CN models, it makes them very suitable for direct instrument miking in orchestral environments. The CN201 is excellent on drums, overheads, double bass, string groups and such.

### **Specifications**

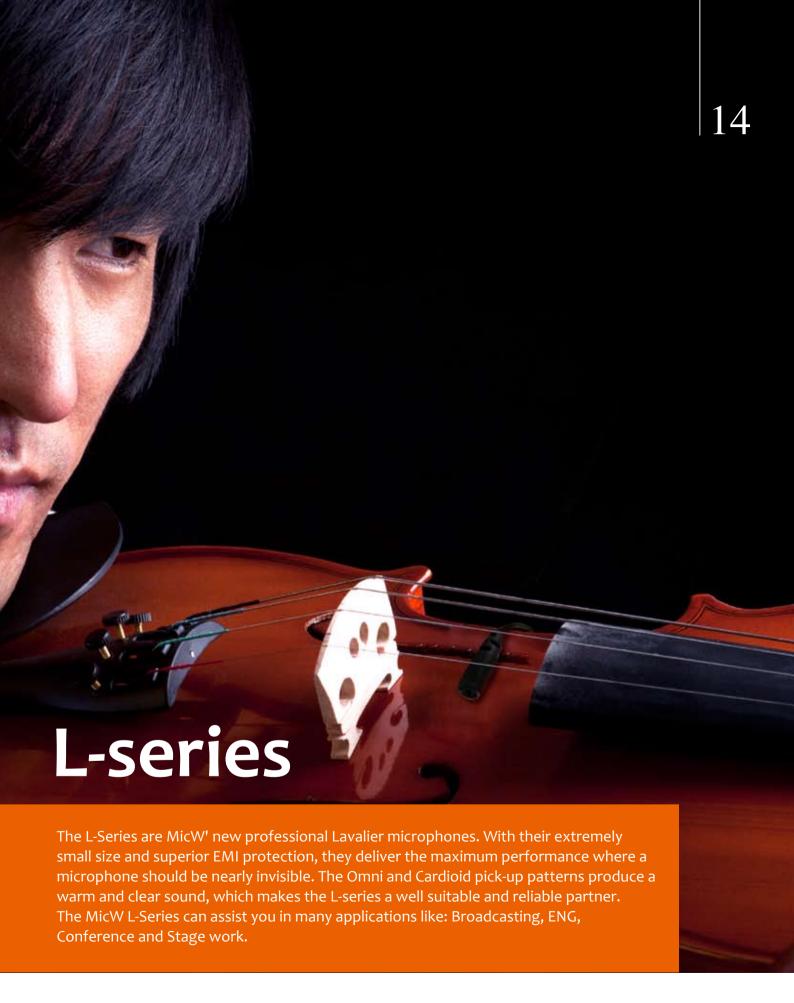
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Microphone CN201	
Туре	Pre-polarized Condenser
Capsule diameter	12.7mm
Polar pattern	Omni
Sensitivity(±2dB)	4omV/Pa;
Frequency response	20Hz~20kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	135dB
Equ. noise level	<18 dBA
Output impedance	<200 Ohm
Cable length	3m
Mic Length	22mm
Weight	34g
Connector	3-pin XLR

### Polar pattern









### **Lavalier Mic**

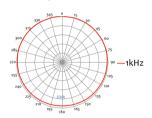
The omnidirectional L825 and cardioid L855 lavalier microphones are recommended for on air productions, forum discussions, and durable enough for ENG use. The minimal size of these microphones makes them perfectly suitable for Television and Video productions.

## L825 Omni Directional

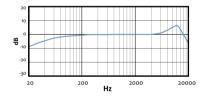
### **Specifications**

Microphone L825	5
Туре	Condenser
Capsule diameter	4.0mm
Principe of operation	Pressure
Polar Pattern	Omni
Sensitivity(±3dB)	5.6mV/Pa
Frequency Response	20Hz~20kHz
Max. SPL(<0.1% THD)	126dB
Equ. noise level	31dB(A)
Power	0.8-5V DC
Operating Temperature	-17℃~+60℃
Cable Length	1.6m
Weight	1g
Connector	Microdot*

### Polar pattern



### Frequency response

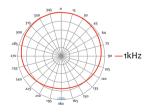


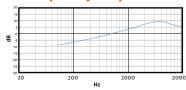
## L855 Cardioid Mic

### **Specifications**

Гуре	Condenser
Capsule diameter	4.0mm
Principe of operation	Pressure Gradient
Polar Pattern	Cardiod
Sensitivity(±4dB)	3.5mV/Pa
Frequency Response	10Hz~10kHz
Max. SPL(<0.1% THD)	130dB
Equ. noise level	4odB(A)
Power	1.3-3V DC
Operating Temperature	-10℃~+50℃
Cable Length	1.6m
Weight	1g
Connector	Microdot*

### Polar pattern





 $<sup>{}^{\</sup>textstyle \star} \text{Please check our website } \text{ for other connectors to connect with your bodypack transmitter.}$ 







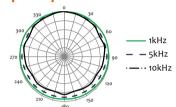
## **E418 Small Diaphragm**

The E418 is a small diaphragm, omnidirectional microphone that uses ¼ E series microphone capsule. It has frequency response from 20 Hz to 20k Hz with 2-4 dB soft rise around 8-10k Hz. Its impulse response and settling time is exceptional short, which gives clear and rich sounds. The E418 microphones are also available as a matched pair.

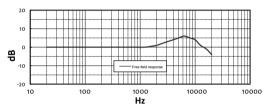
### **Specifications**

Microphone E418	
Туре	Pre-polarized Condenser
Capsule diameter	7mm
Polar pattern	Omni
Sensitivity(±2dB)	8mV/Pa;
Frequency response	20Hz~20kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	135dB
Equ. noise level	<32 dBA
Output impedance	<75 Ohm
Length	145mm
Weight	110g
Connector	3-pin XLR

### polar pattern



### Frequency response



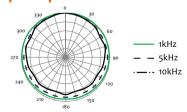
### **E216 Omni Directional**

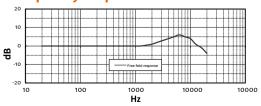
The E216 is an omni directional microphone that uses a ½ inch E series microphone capsule. It offers an extraordinary performance at low costs. Its polymer diaphragm covered by a thin gold layer and copper housing yields a flat frequency response out to 20k Hz with excellent dynamic range and low self-noise. The E216 is the ideal choice for miking delicate instruments, and for spot miking during live performances and or with TV and broadcast productions.

### **Specifications**

Microphone E216	
Туре	Pre-polarized Condenser
Capsule diameter	12.7mm
Polar pattern	Omni
Sensitivity(±2dB)	3omV/Pa;
Frequency response	20Hz~20kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	135dB
Equ. noise level	<28 dBA
Output impedance	<75 Ohm
Length	155mm
Weight	120g
Connector	3-pin XLR

#### polar pattern









## **E436 Miniature Mic**

The MicW E436 is a professional miniature condenser clip-on microphone with an omnidirectional polar pattern. It has dynamic range from 35 dB to 130 dB and flat frequency response from 20Hz to 20k Hz. The E436 has unique mechanical design with removable cable and military standard SMB connector. It can be connected to 48V phantom power using MicW PI48 adaptor. The microphone housing is designed using stainless steel and it has high moisture resistance.

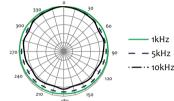
The E436 is an ideal choice for miking up musical instruments, spot miking in live recording as well as TV and broadcast work.

### **Specifications**

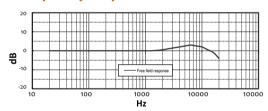


Microphone E436	
Type	Pre-polarized Condenser
Capsule diameter	7mm
Polar pattern	Omni
Sensitivity(±2dB)	12.5mV/Pa;
Frequency response	20Hz~20kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	130dB
Equ. noise level	<35 dBA
Output impedance	<75 Ohm
Cable length	3m
Mic Length	24mm
Weight	10g
Connector	3-pin XLR

### polar pattern



### Frequency response



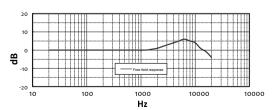
## **BE426 Conference Mic**

The BE426 is boundary layer microphone which is an ideal choice for use in boardrooms, conference facilities, courtrooms, teleconferencing and other applications where excellent vocal pickup is required. The microphone element is an omnidirectional condenser microphone with a very high sensitive of 50 mV/Pa. The microphone body has a height of 8mm. It can be easily placed on desktop or any other surface. The BE426 has a 3m (10ft) cable with 3 pin XLR connector.

### **Specifications**



Туре	Pre-polarized Condenser
Capsule diameter	7.omm
Polar pattern	Omni; half space
Sensitivity(±3dB)	50mV/pa;
Frequency response	20 Hz~20kHz
Power supply	48 v phantom power with PI48 Adaptor
Max. SPL(<1% THD)	127dB
Equ. noise level	<30 dBA
Output impedance	<200 Ohm
Cable length	3m
Size	∮ 6omm×8mm
Weight	23g
Connector	3-pin XLR





### **Measurement Microphones**

What is a good measurement microphone in audio applications? The IEC 61094 standards, entitled "Measurement Microphones", specify the requirements for a good measurement microphone. In addition to frequency response, sensitivity, omnidirectional polar pattern, and dynamic range, there are two additional requirements for a good measurement microphone:

- 1) Calibration: The microphone is capable of being calibrated by one of the following methods:
  - (a) Calibration methods specified in IEC 61094-2 or IEC 61094-3.
  - (b) Comparison with a calibrated laboratory standard microphone.
  - (c) Calibration using a sound calibrator as specified in IEC 60942.

The majority of measurement microphones on the market lack the calibration capability due to their structure or diameter limitations.

2) Environmental Sensitivity Stability: The standards specify microphone sensitivity change with temperature, humidity, and static pressure shall be within ±0.03 dB/C, ±0.001 dB/%, and ±0.03 dB/ kPa. Most of the measurement microphones on the market do not meet such specifications or are not tested for environmental conditions.

MicW has fourteen years experience in manufacturing measurement microphones for industry use. Our new M Series measurement microphones for audio applications reflect that experience.







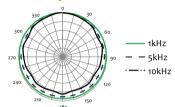
## **M416 Measurement Mic**

The M416 is a calibrated measurement microphone with 1/4 inch capsule. It complies with the IEC 61672 Class 2 sound level meter standard. It is suitable for measuring sound pressure in simple sound fields, such as home recording studio's - high end hifi systems & room conditions.

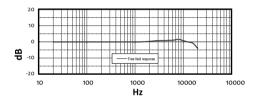
### **Specifications**

Microphone Mac	
Microphone M416 Type	Pre-polarized Condenser
Capsule diameter	7mm
Polar pattern	Omni
Sensitivity(±2dB)	30mV/Pa;
Frequency response	20Hz~20kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	130 dB
Equ. noise level	<30 dBA
Output impedance	<600 Ohm
Maximum Sensitivity Change Under the conditions Temperature -10 to 50°C Humidity up to 98%RH Pressure: 65 to 115 kPa	+-1.0 dB
Length	144mm
Weight	110g
Connector	3-pin XLR

### Polar pattern



#### Frequency response





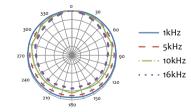
## M215 Measurement Mic

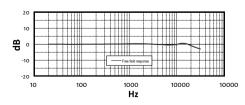
The M215 is a calibrated measurement microphone with 1/2 inch capsule. It complies with the IEC 61094 and IEC 61672 Class 1 sound level meter standards widely used in professional audio environments, such as theater - recording studio - control room design & stage acoustics, to measure the technical references.

### **Specifications**

Microphone M215	
Туре	Pre-polarized Condenser
Capsule diameter	12.7mm
Polar pattern	Omni
Sensitivity(±2dB)	4omV/Pa;
Frequency response	20Hz~31.5kHz
Power supply	48V Phantom power
Max. SPL(<1% THD)	135 dB
Equ. noise level	<18 dBA
Output impedance	<75 Ohm
Temperature Coefficient(dB/°C)	0.009
Humidity Coefficient (dB/%RH)	0.001
Pressure Coefficient(dB/kPa)	0.008
Length	155mm
Weight	120g
Connector	3-pin XLR

### Polar pattern







# Accessories



PP190 Shock Mount for N series



PP290 Shock Mount for E series



PP080 Shock Mount with fixed Pop screen



**PP590**Shock Mount for T series



AM032 Acoustic Equalizer with diameter of 30mm



AM042 Acoustic Equalizer with diameter of 40mm



AM052 Acoustic Equalizer with diameter of 50mm



AM101 Acoustic Equalizer with diameter of 100mm and thickness 30mm



WS051 Wind Screen for 1 inch mic (50mm diameter)



WS052 Wind Screen for 1/2 inch mic(50mm diameter)



WS054 Wind Screen for 1/4 inch mic(50mm diameter)



WS092 Wind Screen for 1/2 inch mic(90mm diameter)



WS094 Wind Screen for 1/4 inch mic(90mm diameter)



GD012 Grid for N201 and N241



GD031 Grid for N101 and N151



GD041 Grid for N101 and N151



GD051 Grid for N101 and N151



CA114 Sound Level Calibrator



**CLO11**Collar Clip for CN



**CLO12** Collar Clip



PB050 Plastic Box



PB060 Plastic Box



PB030 Plastic Box (for E436/BE426/CN201)



PP591 Shock Mount for T series standard



ATO11
Storage tube for M series

## **Company profile**

Known for its perfectly clean sound, quality craftsmanship, and lightness of styling, MicW prides itself in designing and manufacturing high quality, high performance microphones for a wide range of audio measurement and recording applications. MicW microphones and accessories are the right choice when you demand the best in your measurements and recordings for voice, instrument, broadcast, film and video productions.

Product series include the E-Series entry level microphones, i-Series microphones for iOS and other portable devices (details in separate brochure), L-Series lavalier microphones, M-Series test measurement microphones, N-Series nickel diaphragm high performance microphones, and T-Series titanium diaphragm large diameter microphones.

### **Features**

- Flat frequency response for pure sound without unwanted coloring
- Titanium, nickel, stainless steel, and polymer composites capsule diaphragm designs for the best possible microphone frequency response
- Excellent high humidity performance
- Fast transient response, high dynamic range, low noise floor with models that easy handle up to 160 dB SPL
- Quality assurance through ISO 9001 certification



### Heritage

MicW is a member of BSWA Technologies Ltd., a measurement microphone company. BSWA was founded in 1998 as a joint venture between the Chinese Academy of Sciences and five sound engineers looking to market better, more affordable measurement microphones. Today, BSWA microphones are widely used in aerospace, automotive, and environment noise measurements. The experience and expertise gained from designing and manufacturing measurement microphones enabled BSWA to create the new microphone brand MicW for use in audio and music oriented applications.

MicW uses unique methods to produce its capsules, the heart of a microphone, resulting in better performance, reliability, sound definition, and transparency. MicW capsule diaphragms are made from titanium, nickel, stainless steel, and polymer composites so that the best material is always used in its designs. In addition, carefully selected quartz insulating material within the construction ensures stability against high temperatures and humidity. Each capsule is individually calibrated using the free field method according to IEC 61049 measurement microphone standards and aged in an environmental chamber for long term stability.

### **Quality Assurance**

As a leader in the field of microphone technology, MicW invests heavily in product research and development. The main design campus and manufacturing facilities are located in Beijing, China and include anechoic chambers, clean rooms, environmental rooms, and production areas. MicW is committed to total quality management and is ISO 9001 certified ensuring that every product meets stringent performance standards.