

CRY3102

1" Pressure-field Prepolarized Low-noise Microphone

Features

- **Key Specifications**

Sensitivity	50 mV/Pa
Dynamic Range	12 dB to 146 dB
Frequency Range	4 Hz to 8 kHz ± 2 dB

- **Applications**

Speaker test
Coupled cavity application
Audiometer test

- **Standards**

IEC 61094 4:1995 Measurement microphones – Part 4

Introduction

The CRY3102 is a 1-inch pressure-field prepolarized measurement microphone, specifically engineered for use with a coupler. This makes it particularly well-suited for headphone testing and audiometer measurements.

The unique design of the CRY3102 features exceptionally low self-noise, making it an ideal choice for electroacoustic testing. Additionally, its outstanding accuracy and stability ensure it is a reliable tool for acoustic research and development.

Highlights

- **Use of Low-noise Pressure-field Microphones**

Low-noise microphones have very low internal noise. When performing acoustic measurements, they have lower background noise to obtain lower acoustic signals. Pressure-field microphones are specifically designed for measurements in small enclosed cavities or near the sound source ports, and are widely used in fields such as acoustic research and electroacoustic testing.

- **Compatibility**

The CRY3102 measuring microphone is compatible with the 1/2" IEPE preamplifier of CRY SOUND.

IEPE is a universal constant current source power supply technology used on sensors. Each manufacturer has different names, such as ICP, CCP, etc.

- **Calibration**

Each CRY SOUND microphone is calibrated at the factory using traceable calibration equipment. Calibration certificates are provided with each unit. CRY SOUND recommends recalibration at least once a year.

- **Quality & Warranty**

All CRY SOUND microphone capsules use 3rd generation titanium diaphragms and protection grids and synthetic sapphire insulators – resulting in the most rugged and reliable measurement microphones on the market. Titanium provides superior corrosion resistance, high temperature stability, impact resistance and strength-to-mass than traditional nickel and stainless steel. All capsules are assembled in strict clean-room environments for maximum quality.

CRY SOUND microphones are supported by a 10-year warranty—offering one of the best service guarantee in the world.

Technical Specifications

Specifications

Field Type	Pressure-field
Sensitivity(± 1.5 dB)	50 mV/Pa, -26 dB re 1V/Pa
Frequency Response	4 Hz to 8 kHz ± 2 dB
Polarization Voltage	0 V
Capacitance	55 pF (@250 Hz)
Dynamic Range(re.20uPa)	12 dB to 146 dB
Inherent noise	12 dBA
Operating Temperature	-20°C to +60°C (-4°F to +140°F)
Temperature Stability	0.015 dB/°C (-10°C to +50°C) 0.008 dB/°F (+14°F to +122°F)
Static Pressure Stability	-0.01 dB/kPa
Operating Humidity Range	0 to 90%RH no condensation
Humidity Stability	< 0.1 dB (0 to 90%RH no condensation)
Pressure Equalization Vent	Rear vented
IEC 61094-4 Type	WS1P

Dimensions

Height with Grid	19 mm (0.748")
Diameter with Grid	23.77 mm (0.936")

Ordering Information

TEDS Combinations

Microphone Set	CRY3102-S01 Microphone Set (CRY3501 IEPE Preamplifier)
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Optional Accessories

Preamplifier	CRY3503 1/2" 10-32UNF CRY3502 1/2" SMB Interface
Microphone Holder	1" Microphone Holder
Adapter	TA0501 1/2" to 1" Adapter Ring
Sound Level Meter	CRY2851 Sound Level Meter
Power Supply	CRY575 Three-channel Microphone Power Supply
Electroacoustic Analyzer	CRY6151B Electroacoustic Analyzer

Drawings(mm)[inch]

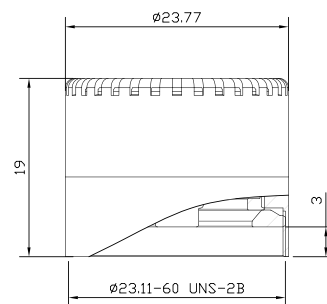


Fig.1 CRY3102 Microphone Drawings

Frequency Response

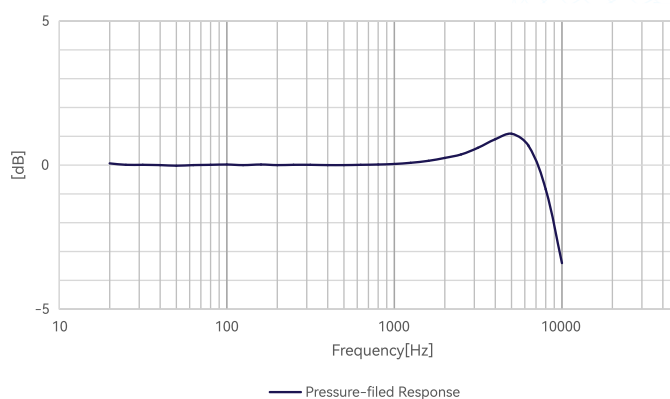


Fig.2 CRY3102 Microphone Typical Frequency Response

Related Products

CRY3101	1" free-field prepolarized low-noise microphone, 50 mV/Pa, 4 Hz-16kHz, 12 dB-146 dB
CRY3202	1/2" pressure-field prepolarized wide-frequency microphone, 12.5 mV/Pa, 3.15 Hz-20kHz, 23 dB-160 dB
CRY3204	1/2" pressure-field prepolarized high-sensitivity microphone, 50 mV/Pa, 3.15 Hz-10 kHz, 16 dB-146 dB
CRY3402	1/4" pressure-field prepolarized High frequency microphone, 1.6 mV/Pa, 4 Hz-70kHz, 45dB-170 dB
CRY3404	1/4" pressure-field prepolarized high-level microphone, 0.56 mV/Pa, 10 Hz-20kHz, 59dB-175dB