

# CRY3102-S01

## 1" Pressure-field Prepolarized Low-noise Microphone Set

### Features

- **Key Specifications**

Sensitivity	50 mV/Pa
Dynamic Range	12 dB to 138 dB
Frequency Range	4 Hz to 8 kHz $\pm 2$ dB

- **Applications**

Headphones measurements – used in conjunction with a coupler  
Audiometers measurements – used in conjunction with a coupler

- **Standards**

IEC 61094 4:1995 Measurement microphones – Part 4

- **Components**

CRY3102 1" Pressure-field Prepolarized Microphone  
CRY3501 1/2" IEPE Preamplifier

### Introduction

The CRY3102-S01 is a pressure-field prepolarized microphone and preamplifier set, which can be used in conjunction with a coupler chamber for electroacoustic-related testing, such as headphones measurements and audiometer measurements. It is also applicable in other fields such as acoustic design research.

### 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 microphone sets 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 CRY SOUND pre-polarized microphone kit requires a constant current source power module (IEPE power supply), also known as ICP, CCP, etc., capable of supplying a current ranging from 2mA to 20mA.

- **TEDS Microphone Set**

Supports TEDS, and TEDS programmed to the IEEE 1451.4 standard for SMART transducers, V 1.0 format.

- **Calibration**

Each CRY SOUND microphone set 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 and preamplifiers 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 ( $\pm 1.5\text{dB}$ )	50 mV/Pa, -26 dB re 1V/Pa
Frequency Response	4 Hz to 8 kHz $\pm 2\text{ dB}$
Polarization Voltage	0 V
Dynamic Range(re.20uPa)	12 dB to 138dB
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
Output Impedance	< 50 $\Omega$
Maximum Output Voltage	> 10.0 Vp
DC Bias Voltage	12V $\pm$ 2 V
Power Supply	IEPE (2 mA to 20 mA)
Typical Operating Current	4 mA
Interface Type	BNC

## Ordering Information

### Consisting of

Measurement Microphone	CRY3102 1" Pressure-field Prepolarized Microphone
Preamplifier	CRY3501 1/2" Preamplifier
Cable	BL5001 BNC to BNC Cable / 1.6m
Adapter	TA0501 1/2" to 1" Adapter Ring

### Optional Accessories

Microphone Holder	1/2" Microphone Holder
Power Supply	CRY575 Three-channel Microphone Power Supply

### Frequency Response

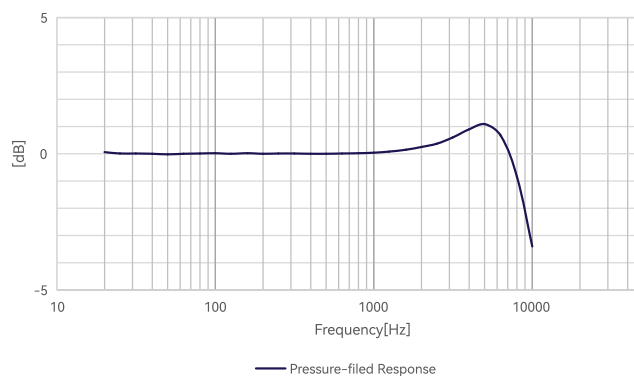


Fig.1 CRY3102-S01 Microphone Set Typical Frequency Response

### Dimensions

Height with Grid	94.25 mm (3.711")
Diameter with Grid	23.77 mm (0.936")

### Drawings(mm)[inch]

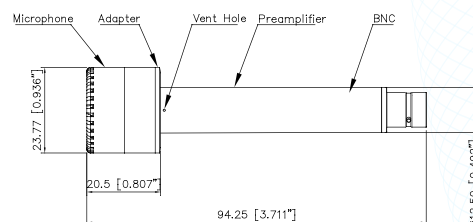


Fig.2 CRY3102-S01 Microphone Set Drawings

### Related Products

CRY3101-S01	1" free-field prepolarized low-noise microphone set, 50 mV/Pa, 4 Hz-16kHz, 12 dB-138dB
CRY3202-S01	1/2" pressure-field prepolarized wide-frequency microphone set, 12.5 mV/Pa, 3.15 Hz-20kHz, 23 dB-150dB
CRY3204-S01	1/2" pressure-field prepolarized high-sensitivity microphone set, 50 mV/Pa, 3.15 Hz-10 kHz, 15 dB-138dB
CRY3402-S01	1/4" pressure-field prepolarized High frequency microphone set, 1.6 mV/Pa, 4 Hz-70kHz, 45dB-168 dB