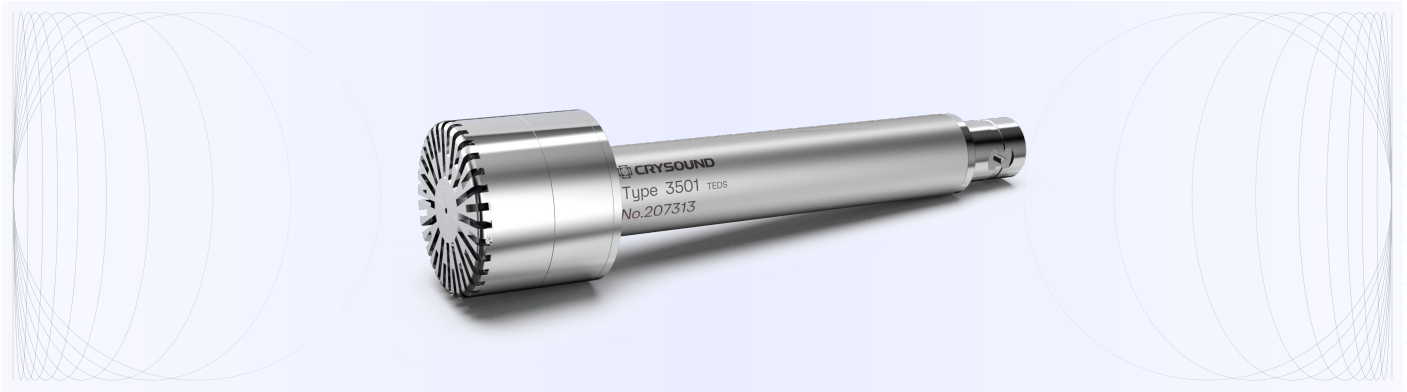




# CRY3102-S01

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

### Features

- **Key Specifications**

|                 |                          |
|-----------------|--------------------------|
| Sensitivity     | 50 mV/Pa                 |
| Dynamic Range   | 12 dBA 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 dBA to 138dB                                               |
| Operating Temperature              | -20°C to +60°C(-4°F to +140°F)                                |
| Temperature Stability              | 0.015 dB/°C (-10°C to +50°C)<br>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                                                           |

### Frequency Response

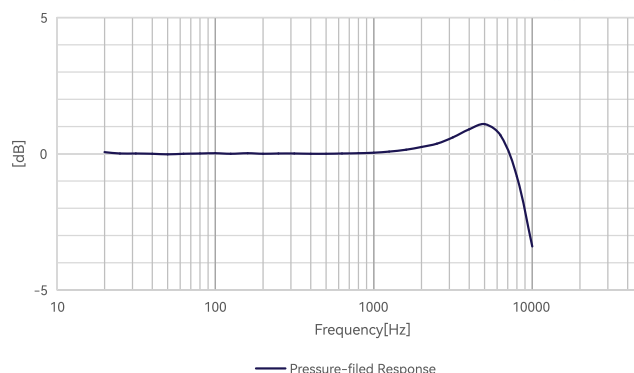


Fig.1 CRY3102-S01 Microphone Set Typical Frequency Response

### Dimensions

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

### Drawings(mm)[inch]

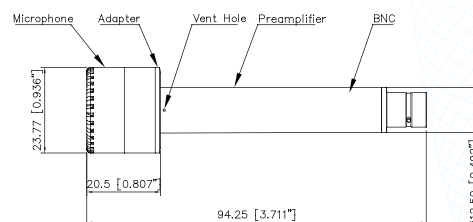


Fig.2 CRY3102-S01 Microphone Set Drawings

## 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 |

### Related Products

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