

CRY3102-S01

1" Pressure-field Prepolarized Low-noise Microphone Set

Features

- **Key Specifications**

| | |
|-----------------|--------------------------|
| Sensitivity | 50 mV/Pa |
| Dynamic Range | 12 dBA to 135 dB |
| Frequency Range | 4 Hz to 8 kHz ± 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 prepolarized microphone kit requires a constant current source power module (IEPE power supply) that can provide a current of 2mA to 20mA and a no-load voltage of 24V.

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

- **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 ± 2 dB |
| Polarization Voltage | 0 V |
| Dynamic Range(re.20uPa) | 12 dBA to 135dB |
| 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 | < 35 Ω |
| Maximum Output Voltage | >9.0 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

| | |
|------------------------|---|
| Electrostatic Actuator | TA0301 1" Electrostatic Actuator |
| Power Supply | CRY575 Three-channel Microphone Power Supply |
| Cable | BL5001 BNC to BNC Cable /1.0m BL5001 BNC to BNC Cable /3.2m BL5001 BNC to BNC Cable /5.0m |

Frequency Response

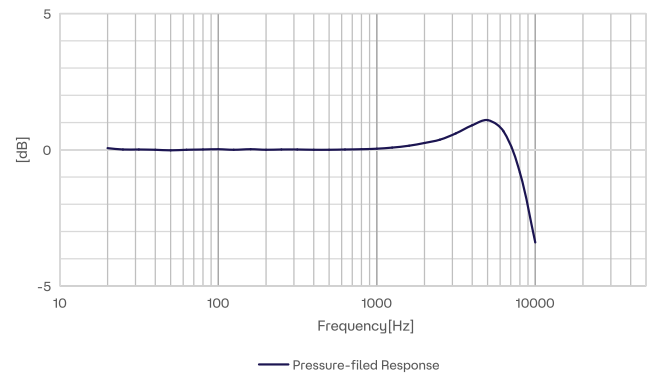


Fig.1 CRY3102-S01 Microphone Set Typical Frequency Response

Dimensions

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

Drawings(mm)[inch]

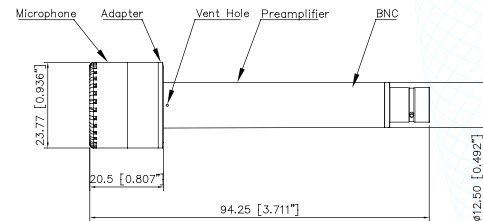


Fig.2 CRY3102-S01 Microphone Set Drawings

Related Products

| | |
|-------------|--|
| CRY3101-S01 | 1" free-field prepolarized low-noise microphone set, 50 mV/Pa, 4 Hz-16kHz, 12 dBA-135dB |
| CRY3202-S01 | 1/2" pressure-field prepolarized wide-frequency microphone set, 12.5 mV/Pa, 3.15 Hz-20kHz, 23 dBA-147dB |
| CRY3204-S01 | 1/2" pressure-field prepolarized high-sensitivity microphone set, 50 mV/Pa, 3.15 Hz-10 kHz, 16 dBA-135dB |
| CRY3402-S01 | 1/4" pressure-field prepolarized ultra-high frequency microphone set, 1.6 mV/Pa, 4 Hz-70kHz, 45dB-161 dB |
| CRY3261-S01 | 1/2" free-field prepolarized ultra low-noise microphone set, 354 mV/Pa, 3.15 Hz-20kHz, 7.5dBA-115dB |