

CRY3101-S01

1" Free-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 16 kHz ± 2 dB

- **Applications**

Anechoic chamber measurements
Speaker test
Low-noise test

- **Standards**

IEC 61094 4:1995 Measurement microphones - Part 4

- **Components**

CRY3101 1" Free-field Prepolarized Microphone
CRY3501 1/2" IEPE Preamplifier

Introduction

The CRY3101-S01 is a free-field prepolarized microphone and preamplifier set specifically designed for sensitive acoustic testing in low-noise environments, such as anechoic chambers and quiet rooms.

It is also widely applicable in various fields that require precise acoustic testing, research in acoustical design, and calibration testing of audio equipment including speakers.

Highlights

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

Low-noise microphones have very low internal noise. When performing acoustic measurements, they have lower background noise to obtain lower acoustic signals. Free-field microphone sets are specifically designed for measurements in environments that are free from reflections or echoes and are widely used in fields such as acoustic research, noise monitoring, and sound system 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	Free-field
Sensitivity(± 1.5 dB)	50 mV/Pa, -26 dB re 1V/Pa
Frequency Response	4 Hz to 16 kHz ± 2 dB
Polarization Voltage	0 V
Dynamic Range(re.20uPa)	12 dB to 138 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	WS1F
Output Impedance	< 50 Ω
Maximum Output Voltage	> 10 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

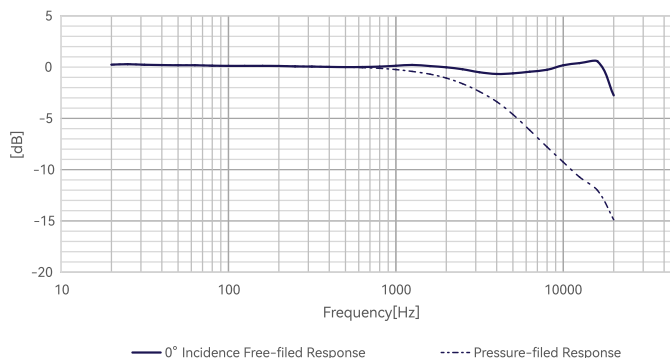


Fig.1 CRY3101-S01 Microphone Set Typical Frequency Response

Dimensions

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

Drawings(mm)[inch]

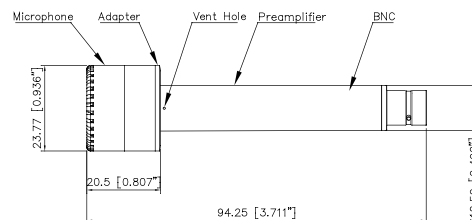


Fig.2 CRY3101-S01 Microphone Set Drawings

Ordering Information

Consisting of

Measurement Microphone	CRY3101 1" Free-field Prepolarized Microphone
Preamplifier	CRY3501 1/2" IEPE 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

CRY3102-S01	1" pressure-field prepolarized low-noise microphone set, 50 mV/Pa, 4 Hz-8 kHz, 12 dB-138 dB
CRY3201-S01	1/2" free-field prepolarized high-frequency microphone set, 12.5 mV/Pa, 3.15 Hz-40 kHz, 23 dB-150 dB
CRY3203-S01	1/2" free-field prepolarized high-sensitivity microphone set, 50 mV/Pa, 3.15 Hz-20kHz, 15 dB-138dB
CRY3403-S01	1/4" free-field prepolarized high-frequency microphone set, 4 mV/Pa, 4 Hz-90kHz, 35 dB-160 dB