

# GRAS 40PP-S1

CCP Free-field QC Microphone,  
High Pressure



Freq range: 10 Hz to 20 kHz  
Dyn range: 32 dB(A) to 142 dB  
Sensitivity: 10 mV/Pa ( $\pm 3$  dB)

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The GRAS 40PP-S1 QC Microphone, High Pressure is a robust, cost-effective microphone designed for use in production-line testing of loudspeakers and acoustic transducers. It has a wide frequency range reaching up to 20 kHz and a large dynamic range from <32 dB(A) to 142 dB.

## Typical applications and use

- Production-line testing of drivers, receivers, and microspeakers
- Sound-scape recording in array configurations
- Multichannel measurements (analysis)

## Design

The cost-effectiveness of the 40PP-S1 is a key consideration when setting up multiple production lines. Close manufacturing tolerances provide the 40PP-S1 with a high degree of interchangeability – a major advantage when used in production-line test setups.

The robust standard BNC connector of the 40PP-S1 ensures an easy-to-handle setup and supports the use of standard RG58 cables all the way from the microphone to the input module.

The integrated CCP (Constant Current Power) preamplifier requires a constant-current power supply, such as the [GRAS 12AL](#) 1-Channel CCP Power Module with A-Weighting filter, or any other CCP compatible power supply or input module. The built-in TEDS (Transducer Electronic Data Sheet, according to IEEE 1451.4) chip provides information about the microphone that can be used by systems designed for use with TEDS.

## Microphone Calibration

Calibration is easy with a GRAS pistonphone, such as the [GRAS 42AA](#), together with a ¼" microphone adapter.

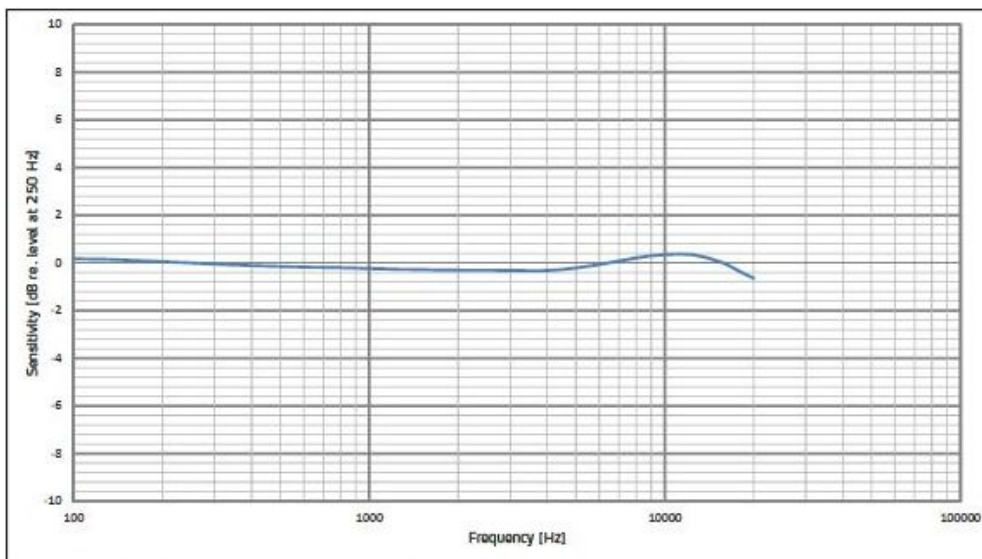
Before leaving the factory, GRAS products are tested and calibrated by GRAS, and an individual test certificate is included with the product.

## Warranty

GRAS offers 3 years warranty against defective

materials and workmanship.

Polarization/Connection		0 V / CCP
Frequency range ( $\pm 1$ dB)	Hz	50 to 5 k
Frequency range ( $\pm 2$ dB)	Hz	5 k to 20 k
Frequency range ( $\pm 3$ dB)	Hz	10 to 50
Dynamic range lower limit (microphone thermal noise)	dB(A)	<32
Dynamic range upper limit	dB	142
Set sensitivity @ 250 Hz ( $\pm 3$ dB)	dB re 1V/Pa	10
Power supply (Constant Current Power)	mA	2 to 20
Microphone venting		Front
Output impedance	$\Omega$	<50
Temperature range, operation	$^{\circ}\text{C} / ^{\circ}\text{F}$	-10 to 50 / 14 to 122
Temperature range, storage	$^{\circ}\text{C} / ^{\circ}\text{F}$	-40 to 85 / -40 to 185
Influence of axial vibration @1 m/s <sup>2</sup>	dB re 20 $\mu\text{Pa}$	50
TEDS UTID (IEEE 1451.4)		27 v. 1.0
Connector type		BNC
CE/RoHS compliant/WEEE registered		Yes/Yes/Yes
Weight	g / oz	5.5 / 0.19401

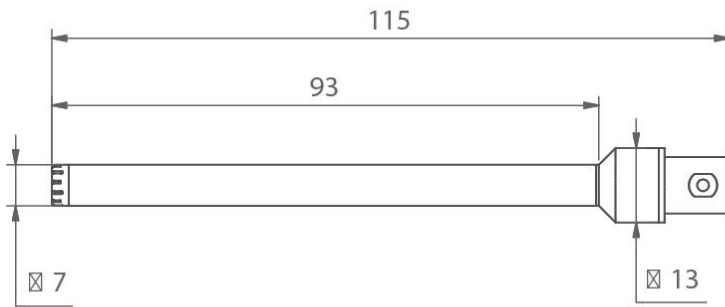


Typical frequency response

GRAS Sound & Vibration reserves the right to change specifications and accessories without notice.



Dimensions in mm



GS0528  
40PP



## Optional items

<a href="#">GRAS AA0039-CL</a>	BNC to BNC 50 $\Omega$ extension cable, customized length
<a href="#">GRAS 12AL</a>	1-Channel CCP Power Module with A-weighting filter
<a href="#">GRAS AL0028</a>	Tripod adapter
<a href="#">GRAS RA0092</a>	Rain-protection Cap for array microphones
<a href="#">GRAS 42AP</a>	Intelligent Pistonphone, Class 0
<a href="#">GRAS 42AG</a>	Multifunction Sound Calibrator, Class 1

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# GRAS Worldwide

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than 40 countries

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## ABOUT GRAS SOUND & VIBRATION

GRAS is a worldwide leader in the sound and vibration industry. We develop and manufacture state-of-the-art measurement microphones to industries where acoustic measuring accuracy and repeatability is of utmost importance in R&D, QA and production. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, and consumer electronics. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect and trust.

**GRAS** Sound  
& Vibration