

# GRAS 40PS-1

CCP 表面传声器



频率范围 10 Hz - 12 kHz  
动态范围 27 dB(A) - 145 dB  
灵敏度 15 mV/Pa

GRAS 表面传声器 40PS-1 是一种小尺寸、轻便的表面传声器，适用于暴露在气流中的平面和曲面的通用测量。

## 典型应用与使用

航空声学  
风洞应用  
大型阵列

## 设计

GRAS 40PS-1 是一款超薄轻量化表面传声器，专为航空航天声学、风洞应用及大型阵列中的平面与曲面测量而设计，适用于多种通用测试场景。

其频率范围为 10 Hz - 12 kHz 动态范围为 27 dBA - 145 dB

它配备了一个集成的 CCP 前置放大器，支持 TEDS 可调式电子数据存储），符合 IEEE 1451.4 标准，用于远程识别和读取校准灵敏度。

它需要一个恒流电源，例如带 A 计权滤波器的 GRAS 12AL 1 通道 CCP 电源模块，或任何其他兼容的恒流电源。

压力平衡是通过传声器前部靠近振膜一侧设置的均压孔实现的。这使得该传声器适用于静压变化迅速的环境，例如飞机或在山地地区行驶的公路车辆。

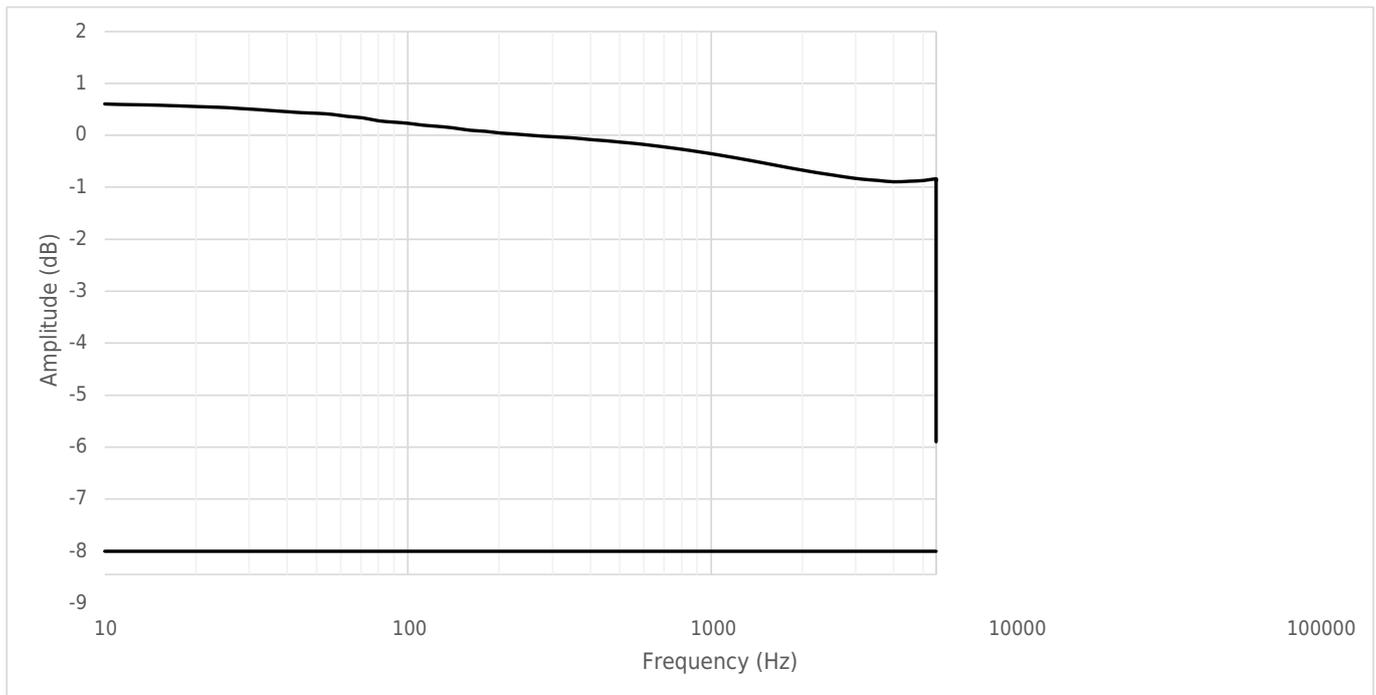
40PS-1 配备了一根长度为 1.5 米的同轴电缆，并配有 Microdot 接口。随附一个 BNC 适配器。该设备配备了一个柔软的可拆卸硅橡胶护罩和粘合式安装垫片。由于其轻便的特性，它对薄板结构的附加重量影响非常小。

该表面传声器搭配任意一款 GRAS 支架使用时，整体高度不超过 3 毫米。

## 安装方法

根据环境风速的不同，可采用多种方式将

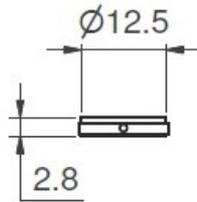
Polarization/Connection		200 V / Traditional
Frequency range (+1, -2 dB)	Hz	10 to 12 k
Frequency range (+1, -8 dB)	Hz	10 to 20 k
Dynamic range lower limit (microphone thermal noise)	dB(A)	<27
Dynamic range upper limit with GRAS CCP preamplifier	dB	145
Set sensitivity @ 250 Hz ( $\pm 2$ dB)	mV/Pa	15
Power supply (Constant Current Power)	mA	2 to 10
Microphone venting		Front
IEC 61094-4 Compliance		WS3P
Output impedance	$\Omega$	<50
Temperature range, operation	$^{\circ}\text{C} / ^{\circ}\text{F}$	-10 to 50 / 14 to 122
TEDS (IEEE 1451.4)		27 v. 1.0
Connector type		Microdot 10/32
CE/RoHS compliant/WEEE registered		Yes / Yes / Yes
Weight	g / oz	1.5 / 0.035 w/o cable // 4.8 / 0.14 with cable



## 典型的压力频率响应

GRAS Sound & Vibration 保留更改规格和配件的权利，恕不另行通知。

Dimensions in mm



## 标配

GRAS GR0815	Silicon rubber fairing
GRAS GR0933	Top adhesive pad 0.5 mm (pre-cut, single-sided)
GRAS GR0934	Base adhesive pad 0.13 mm (pre-cut, double sided)
GRAS MI0031	Cleaning tissue
GRAS AE0046	Adapter BNC male to Microdot female

## 选配

<a href="#">GRAS 12AL</a>	1-Channel CCP Power Module with A-weighting filter
<a href="#">GRAS 12AQ</a>	2-Channel Universal Power Module with signal conditioning and PC interface
<a href="#">GRAS 42AP</a>	Intelligent Pistonphone, Class 0
<a href="#">GRAS 42AA</a>	Pistonphone, Class 1
GRAS RA0147	Aluminum fairing/mounting plate
GRAS RA0145	Calibration Adapter

GRAS Sound & Vibration 保留更改规格和配件的权利，恕不另行通知。

# GRAS Worldwide

Subsidiaries and distributors in more than 40 countries

## HEAD OFFICE, DENMARK

**GRAS SOUND & VIBRATION**  
Skovlytoften 33  
2840 Holte  
Denmark  
Tel: +45 4566 4046  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[gras@grasacoustics.com](mailto:gras@grasacoustics.com)

## USA

**GRAS SOUND & VIBRATION**  
9290 SW Nimbus Avenue  
Beaverton, OR 97008  
Tel: 503-627-0832  
Toll Free: 800-231-7350  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[sales-usa@grasacoustics.com](mailto:sales-usa@grasacoustics.com)

## UK

**GRAS SOUND & VIBRATION**  
Unit 115, Gibson House,  
Ermine Business Park, Huntingdon,  
Cambridgeshire, PE29 6XU  
Tel: +44 (0)7762 584 202  
[www.GRASacoustics.com](http://www.GRASacoustics.com)  
[sales-uk@grasacoustics.com](mailto:sales-uk@grasacoustics.com)

## CHINA

**GRAS SOUND & VIBRATION**  
Room 502, Building T1,  
No.1398 Ali Center  
Shenchang Road,  
Minhang District,  
Shanghai, China, 201107  
Tel: +86 21 400-888-9826  
[www.GRASacoustics.cn](http://www.GRASacoustics.cn)  
[cnsales@grasacoustics.com](mailto:cnsales@grasacoustics.com)



## 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 is represented through subsidiaries and distributors in more than 40 countries and is part of Axiometrix Solutions, a leading test solutions provider comprised of globally recognized measurement brands. Read more at [www.GRASacoustics.com](http://www.GRASacoustics.com)

[www.GRASacoustics.com](http://www.GRASacoustics.com)

**GRAS**  
An Axiometrix Solutions Brand