



G.R.A.S. 47AX 1/2" CCP Flush-mount Microphone Set

Freq range: 3.15 Hz to 20 kHz
Dyn range: 22 dB(A) to 150 dB
Sensitivity: 12.5 mV/Pa

The G.R.A.S. 47AX 1/2" CCP Flush-Mount Microphone Set is a low profile 1/2" precision pressure microphone with built-in CCP preamplifier.

Technology

Typical applications and use

- Flush mounting in confined spaces
- Flush mounting in clay models
- Ground array measurements
- General noise measurements

Design

With a height (to the diaphragm) of only 8 mm, 47AX is suitably designed for flush mounting in plates in ground array applications and other applications with size constraints. The microphone is a prepolarized pressure microphone with a dynamic range from 22 dB to 146 dB and a frequency range from 3.15 Hz to 20 kHz. The built-in preamplifier is a low noise constant current power (CCP) type, with a built-in TEDS circuit for automatic transducer identification. The set has an integrated 1.5 m cable with Microdot connector plus an adapter for BNC cable.

Flush-mounting is ideal where holes can be made in the structure, such as a clay model, to accommodate the

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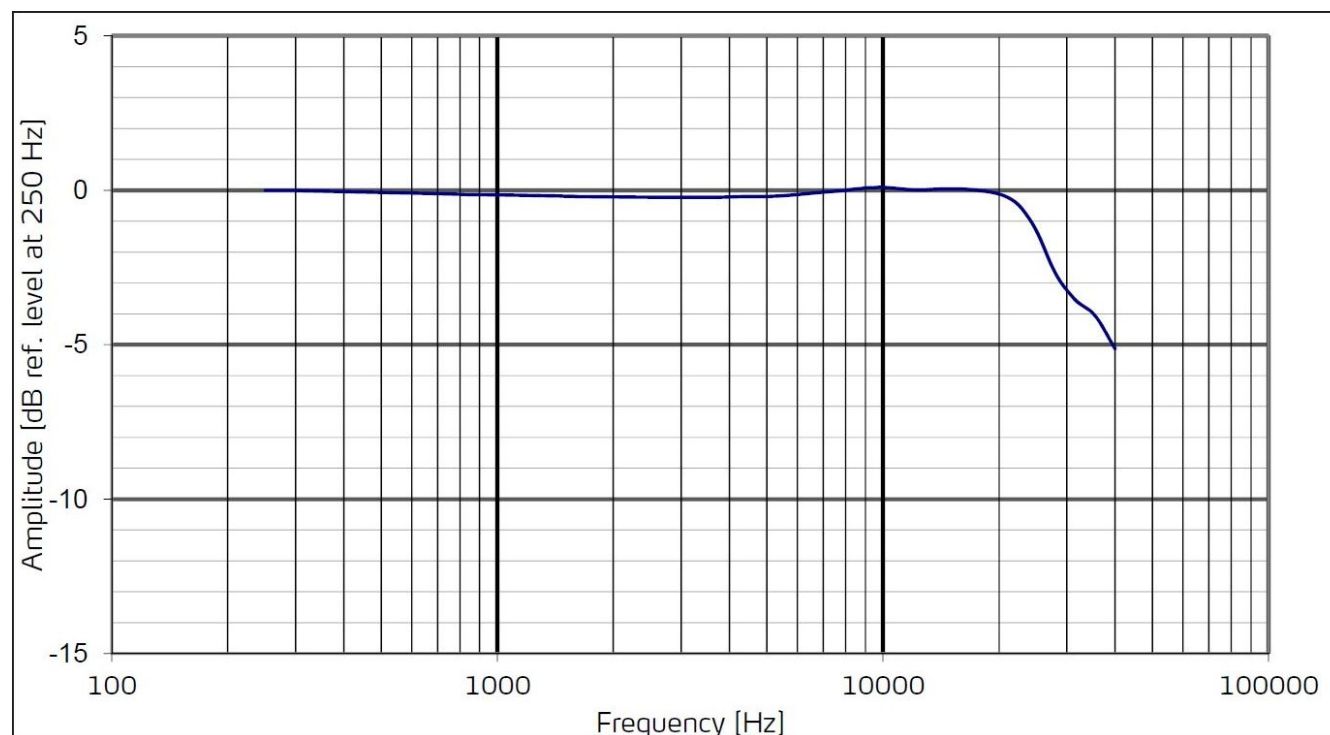
front-vented 47AX. A rear-vented version is also available, the 47AX-S1.

It is included with the [G.R.A.S. 67AX](#) Ground Array Set, which has a 400 mm diameter mounting plate.

The 47AX is based on the IEC 61094 standard for measurement microphones.

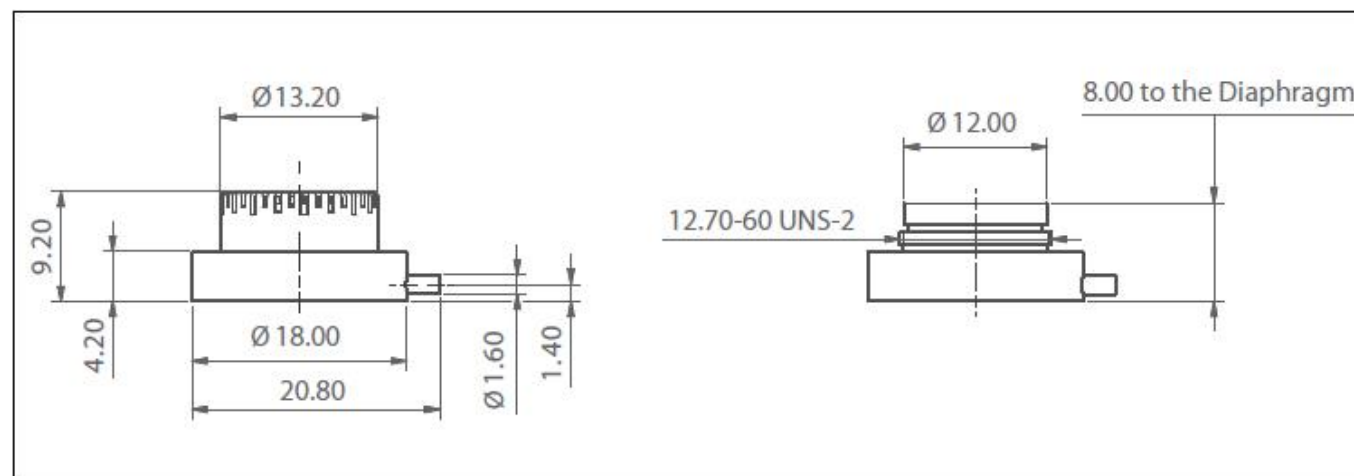
Specifications

Frequency range (± 1 dB)	Hz	5 to 12.5 k
Frequency range (± 2 dB)	Hz	3.15 to 20 k
Dynamic range lower limit with G.R.A.S. preamplifier	dB(A)	22
Dynamic range upper limit with G.R.A.S. CCP preamplifier	dB	150
Set sensitivity @ 250 Hz (± 2 dB)	mV/Pa	12.5
Polarization voltage	V	0
Power supply (Constant Current Power)	mA	2 to 10
Microphone venting		Front
Output impedance	Ω	< 50
Temperature range, operation	$^{\circ}\text{C}$ / $^{\circ}\text{F}$	-30 to 70 / -22 to 158
Temperature range, storage	$^{\circ}\text{C}$ / $^{\circ}\text{F}$	-40 to 85 / -40 to 185
Static pressure coefficient @250 Hz	dB/kPa	-0.008
Humidity range non condensing	% RH	0 to 100
Humidity coefficient @250 Hz	dB/% RH	< 0.1
Influence of axial vibration @1 m/s ²	dB re 20 μPa	66
TEDS UTID (IEEE 1451.4)		27 v. 1.0
Connector type		Microdot 10/32
CE/RoHS compliant/WEEE registered		Yes/Yes/Yes
Weight	g / oz	9 / 0.317



Typical frequency response

Dimensions



Ordering info

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Included items

G.R.A.S. AE0046	Microdot - BNC male adapter
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Optional items

G.R.A.S. 12AL	1-Channel CCP Power Module with A-weighting filter
G.R.A.S. 42AP	Intelligent pistonphone
G.R.A.S. RA0221	Pistonphone Calibration Adapter for 1/2" Flush-mount Microphone Sets
G.R.A.S. RA0501	Mounting Adapter for 1/2" Flush-mount Microphone Set
G.R.A.S. AE0074	BNC male to female adapter
G.R.A.S. AA0035	3 m BNC - BNC Cable
G.R.A.S. AA0037	10 m BNC - BNC Cable
G.R.A.S. AA0039-CL	Customized length BNC - BNC Cable



We make Microphones

Tradition

Since the establishment in 1994, G.R.A.S. have been 100% dedicated to developing and manufacturing high-quality measurement microphones and related acoustic equipment. Founded by the Danish acoustics pioneer Gunnar Rasmussen who for more than 60 years has contributed to the world of sound and vibration with his unique ideas and designs. From the first reproducible 1" condenser measurement microphone that enabled quality measurements and instrumentation for acoustic calibration, Mr. Rasmussen's ingenuity and foresight led to the world's most popular acoustic sensor: The 1/2" measurement microphone. Then the 1/4" and 1/8" microphones followed with outstanding dynamic and high-frequency capability that brought higher definition and transparency into impulse noise diagnostics. Many variants have been made available over the years; all based on Gunnar Rasmussen's original 1" pressure microphone design.

Innovation

At G.R.A.S., we and our customers benefit daily from Mr. Rasmussen's exceptional understanding of acoustics, physics, electronics and measurement needs. Not only in R&D but throughout the organisation, we are proud to develop, produce and offer the broadest range of high-quality measurement microphones and accessories in the industry. And as a family company, now owned and managed by the two sons, Per Rasmussen and Peter Wulf-Andersen, we safeguard our heritage and knowledge to help create new opportunities with our customers. We work with everybody with an interest in sound or noise within the fields of aerospace, automotive, audiology, consumer electronics, noise monitoring, building acoustics and telecommunications, metrology, education, consultancy, legislation and system integration.

Quality

All our microphones are solely produced in stainless steel and in a quality that allows for a 5 year warranty. Should you by mistake damage the diaphragm on a G.R.A.S. microphone, our special technique enables repair at very reasonable price.

Partners

G.R.A.S. is represented worldwide in more than 40 countries by subsidiaries and distributors. Whether you are searching for a multi-channel solution or just a replacement microphone for your sound level meter G.R.A.S. will help solve your needs. Visit gras.dk for your local G.R.A.S. partner.