

# GRAS 12AN

4-Channel Power Module



Connection: Traditional 200 V  
Channel(s): 4

The GRAS 12AN 4-Channel Power Module is a four-channel power module with 7-pin LEMO 1 B connectors for externally polarized measurement microphone sets. The inputs are AC-coupled directly to the outputs for a flat frequency response down to 0.05 Hz. It provides the basic features for powering condenser measurement microphones. The polarization voltage can be selected to 200 V for externally polarized microphones or 0 V for prepolarized microphones. The supply voltage for the preamplifiers is  $\pm 15$  V.

## Typical Applications and Use

The special features of the 12AN Power Module make it suitable for general use.

The 12AN Power Module is for general use in acoustic measurements both in the laboratory and in the field. If you are looking for a cost-effective solution or a multi-channel power module with direct coupling (no filters) to the output, the 12AN Power Module is a logical choice.

The input signal is coupled to the output without any filtering or A-weighting network.

Because of this, the 12AN Power Module is ideally suited for infra-sound measurements. The low-frequency cut-off at 0.05 Hz is so low that it will not be the limiting factor in infra-sound measurements. A suitable microphone system for this application is the combination of the [GRAS 40AN 1/2" Free-field microphone, low frequencies](#), and the matching preamplifier, the [GRAS 26HG 1/4" Preamplifier, High Impedance](#).

The polarization voltage is very stable and the sensitivity of the microphone is therefore kept very stable. For this reason, the 12AN Power Module is well suited for microphone calibration.

The 12AN Power Module has four channels for multi-channel measurements and calibration setups requiring more than one channel. You can operate the 12AN Power Module on batteries or an external DC power supply. A battery indicator monitors the battery condition.

## Compatibility

The 12AN Power Module can be used with all standard, externally polarized microphone sets and standard frontends or data acquisition units.

However, when setting up a measurement chain

with the 12AN Power Module, you need to ensure proper matching of the components so that signal levels and cable lengths do not interfere with the validity of your measurements.

## Quality and warranty

The 12AN Power Module is built into a sturdy, anodized aluminum case and built to high-quality standards which enables GRAS to offer 2 years warranty against defective materials and workmanship.

## Service

Before leaving the factory, all GRAS products are tested. Should a power module become defective, it can be sent to GRAS for repair.

CONDITIONING		
Frequency response ( $\pm 0.2$ dB)	Hz	0.05 to 200 k
Output channel(s)		4
Direct coupling input to output		No
Linear mode		No
Type		Traditional power supply (LEMO)
Input channel(s), traditional power supply		4
Preamplifier supply	V	+/-15
Polarization voltage	V	0 / 200
Overload indication		No
PC controllable		No
External filter option		No
Power amplifier overload detection		No
POWER SUPPLY		
Power supply, battery		4 x LR6 (AA)
Power supply, external	Vdc	6 to 20
Power consumption	mA	130
Battery life	h	25
Battery low indication		Yes
Fuse	mA	160
Temperature range, operation	°C / °F	-10 to +50 / 14 to 122
Weight	g / oz	1,200 / 42,329

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

## Included Items

One of these Power Supplies:	(Depending on country)
GRAS AB0002	Power supply 230 VAC to 15 VDC. EU-connector
GRAS AB0006	Power supply 230 VAC to 15 VDC. UK-connector
GRAS AB0003	Power supply 120 VAC to 15 VDC. USA-connector

## Extension cables with 7-pin LEMO connectors

<a href="#">GRAS AA0008</a>	3 m
<a href="#">GRAS AA0009</a>	10 m
GRAS AA0012	30 m
GRAS AA0014	100 m
GRAS AA0020-XX	Custom, XX length in metres

## Extension cables with BNC connectors

GRAS AA0034	2 m
<a href="#">GRAS AA0035</a>	3 m
GRAS AA0036	5 m
<a href="#">GRAS AA0037</a>	10 m
GRAS AA0038	30 m
GRAS AA0039-XX	Custom, XX length in metres

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

# 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 315, RuiBo Center(T1)  
Lane683, Shenhong Rd,  
Minhang District,  
Shanghai, China, 201107  
Tel: +86 21 64203370  
[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 and related equipment for industries where acoustic measuring accuracy and repeatability are of the utmost importance. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, consumer electronics and other highly demanding industries. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect, trust and require. 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)

[grasacoustics.com](http://grasacoustics.com)

**GRAS**  
An Axiometrix Solutions Brand